



Somerset County Council

Somerset Transport Policies
Strategic Environmental
Assessment Environmental
Report

Appendix 1 (Topic Paper 1
Health)

Prepared for:

**Somerset County Council
Taunton**

Prepared by:



**ENVIRON
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Table of Contents

1	Introduction	1
2	Policy Context	1
2.1	National Transport Goals	2
2.2	Regional Spatial Strategy (RSS)	2
2.3	Sustainable Community Strategy and Local Area Agreement	3
3	The Influence of the Somerset County Council Transport Policies	7
4	Baseline Data	7
4.1	General Health Data	7
4.2	Air Quality Data	8
4.3	Noise and Nuisance from Traffic	9
4.4	Health Facilities in Somerset	11
4.5	Road Safety	12
4.6	Physical Fitness and Health in Somerset	14
5	Data Sources and Gaps	16
5.1	Data Sources	16
5.2	Data Gaps	16
6	Sustainability Issues	16
7	Suggested SEA Objectives	18

1 Introduction

This is Topic Paper 1 of the SEA Environmental Report of Somerset County Council Transport Policies (the equivalent of the Local Transport Plan). The topic paper addresses the potential issues of relevance to the Somerset County Council Transport Policies which are related to the RSS high level sustainability objective of¹:

Improving health

There are five other Topic Papers that address:

- Supporting communities that meet people's needs (Topic Paper 2);
- Developing the economy in ways that meet people's needs (Topic Paper 3);
- Provide access to meet people's needs with least damage to communities and the environment (Topic Paper 4);
- Maintain and improve environmental quality and assets (Topic Paper 5); and
- Minimising consumption of natural resources (Topic Paper 6);

This paper sets out:

- The policy context that the Somerset County Council Transport Policies will need to address;
- The influence that the Somerset County Council Transport Policies 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 Somerset County Council Transport Policies directly help 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 has been included below of the key documents that the Somerset County Council Transport Policies should help to deliver: The national transport goals, the Regional

¹ 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.

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 Somerset County Council Transport Policies.

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 Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation* (July 2008). The RSS includes a number of relevant policies including (policies have been summarised):

Policy HE1 Planning for Healthcare: Plans for the provision or reorganisation of healthcare shall be fully complementary with plans for development and change in the long term. At an early stage in preparing Local Development Frameworks, and in determining planning applications, Local Authorities should work closely with healthcare providers (the Strategic Health Authorities, Primary Care Trusts and NHS Trusts) to ensure that timely provision is made. Local Development Frameworks should support proposals for the provision of additional healthcare facilities, recognising that the structure of provision is changing.

Policy HE2 Promoting Health: LDDs should address preventive measures to address causes of ill health and include actions that can help shape healthy communities.

Policy RE9 Air Quality: The impacts of development proposals on air quality must be taken into account and Local Authorities should ensure, through LDDs, that new development will

not exacerbate air quality problems in existing and potential AQMAs. This should include consideration of the potential impacts of new developments and increased traffic levels on internationally designated nature conservation sites, and adopting mitigation measures to address these impacts.

2.3 Sustainable Community Strategy and Local Area Agreement

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

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

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

- Aim 5: Staying Safe: The vision for 2026 - People of all ages feel safe in their homes and on the streets and roads of Somerset.
- Aim 6: Being Healthy: The vision for 2026 - People are healthy and everyone has the information and support to be able to make the best choices about their lifestyles.
- Relevant challenges highlighted are:
 - Reduce health inequalities;
 - Improving road safety; and
 - Tackle high risk health issues.

Relevant targets are:

- Increase healthy life expectancy at age 65;
- Reduce the number of people killed or seriously injured in road traffic accidents;
- Increase people's overall health and wellbeing;
- Reduce the mortality rates from all circulatory diseases at ages under 75;
- Reduce obesity among primary school age children in Year 6; and
- Increase the number of children and adults regularly participating in physical activity.

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.

- NI 47 People killed or seriously injured in road traffic accidents;
- NI 56 Obesity in primary school age children in Year 6;

- NI 121 Mortality rates from all circulatory diseases at ages under 75; and
- NI 137 Healthy life expectancy at aged 65.

Table TP1.1: Improving Health: General Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
International documents	
<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>
National documents	
<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>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>
Regional documents	
The Strategic Framework for Improving Health in the South West 2008/09 to 2010/11 (NHS South West, 2008)	The Strategic Framework for Improving Health in the South West: One of the strategic priorities is staying healthy. Some of the actions needed to do this include using evidence based behaviour change models to tackle obesity and physical activity and promoting healthy built environments
Local documents	
<p>Somerset Air Quality Strategy (Somerset County Council, 2008)</p> <p>NHS Somerset Annual Report 2007/2008.</p>	<p>Somerset Air Quality Strategy: Work towards achieving European/national air quality objectives and maintain good air quality where it exists</p> <p>NHS Somerset Annual Report: Improve the overall health of local people and narrow the gap between</p>

	the health of the wealthiest and the poorest in the county.
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3 The Influence of the Somerset County Council Transport Policies

It is important that the SEA is focused on how the Somerset County Council Transport Policies can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The Somerset County Council Transport Policies can influence the health of the population in the following ways:

- Through improving the safety of road users, pedestrians and cyclists;
- Through improving air quality and noise pollution (by improving congestion / reducing traffic and persuading people to use more sustainable modes); and
- Through making healthier modes of travel and physical activity more attractive / easier.

4 Baseline Data

4.1 General Health Data

During the 2001 Census respondents were asked if they had any limiting long-term illness, health problem or disability that restricted their daily activities or the work they could do. 33.1% of the population in Somerset were suffering from a limiting long-term illness. This is greater than the regional and national averages of 18.1% and 18.2% respectively and this is likely to be due to the much higher proportion of older people in Somerset compared to the rest of the South West region and the UK.

The population of Somerset is ageing and there are now more people aged 65 and older in Somerset than there are aged 18 and under and the population structure will continue to age over the next 20 years (Somerset NHS Annual Public Health Report, 2008/2009). The mean age in Somerset (41.1) is higher than both in England (38.6) and the South West (40.6). Somerset also has the 4th lowest % of working age people among the 16 South West county and unitary authorities. In terms of future population change ONS estimates suggest that there will be a 14% rise in the total population of Somerset by 2025. The population aged 65 and over is set to grow by 55% over the same period and the over 85s by 73% (Somerset NHS Annual Public Health Report, 2008/2009).

Despite the larger number of people with long term limiting illness, Somerset has much higher life expectancies than the rest of the South West region and England (Source: ONS Life Expectancy at Birth 3-year rolling average 2005-07):

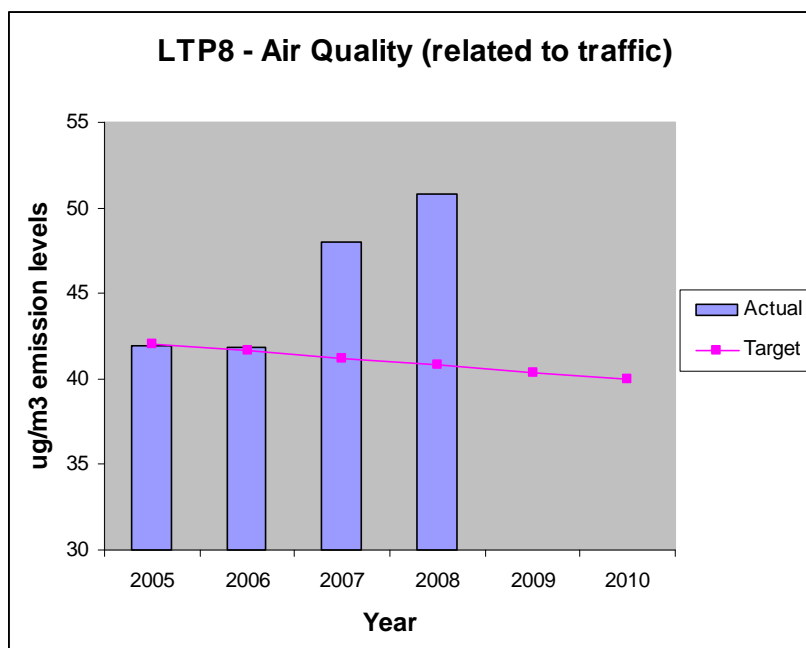
- All Somerset districts have a higher male life expectancy than England (77.7) and the South West (78.7), including Taunton Deane (78.4) and South Somerset (79.2); and
- All districts also have a higher female life expectancy than England (81.8) and the South West (82.9), including Mendip (82.7) and West Somerset (84.0).

4.2 Air Quality Data

The Somerset Air Quality Strategy (2008) makes the point that broadly speaking, air quality across the County is good. Industrial processes within the districts do not pose a threat to air pollution, and the major source of emissions is from traffic. Air Quality Management Areas have been declared in Taunton (East Reach and Henlade) and Yeovil town centre.

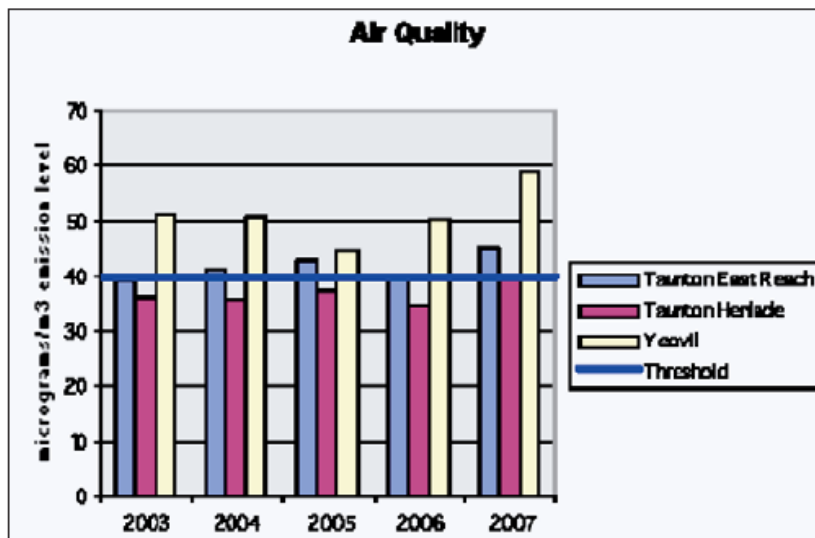
Air quality is monitored as part of the Somerset County Council Transport Policies process. The LTP indicator (LTP8) is a combined average of the air quality management areas in Taunton and Yeovil. The air quality target has been tightened year on year and Figure TP1.1 demonstrates that in the previous two years air pollution has been much higher than target.

Figure TP1.1: Air Quality Target



Further information on nitrogen dioxide concentration at the AQMAs is shown in Figure TP1.2. Nitrogen dioxide concentrations have slightly increased since 2003.

Figure TP1.2: Nitrogen dioxide concentrations at AQMAs (Taunton and Yeovil combined)



According to the latest Air Quality Action Plans Progress Reports for Taunton there is progress being made through a number of proposed measures. These include traffic-light improvements in East Reach AQMA and in Taunton town centre. Major schemes in progress that should help ease traffic in AQMAs include Taunton Third Way, Northern Inner Distributor Road and East of Taunton Park and Ride.

Additional measures in Yeovil include the improved signalling of the Hospital, Police station and Fiveway roundabouts in Yeovil. Additional junctions to roundabout conversions are also in progress in Yeovil. Improvements in linking the bus station and the rail station in Yeovil are progressing. General improvement on the bus and cycle provisions in Yeovil is also underway.

4.3 Noise and Nuisance from Traffic

The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008) identified which routes are sensitive within the study area (which covers Taunton, Bridgwater and Wellington) particularly in relation to noise impact from traffic. These routes were identified as:

Taunton

- A358 Staplegrove Road/ Greenway Road
- A3038 Station Road/Kingston Road
- Bridge Street
- North Street
- Corporation Street
- The A38 Shuttern/Upper High Street/Mary Street
- A358 Priorswood Road and Priory Bridge Road

Bridgwater

- A38 Taunton Road

- A372 Westonzoyland Road
- A39 Bath Road
- A38 Bristol Road
- A39 Quantock Road and for

Wellington

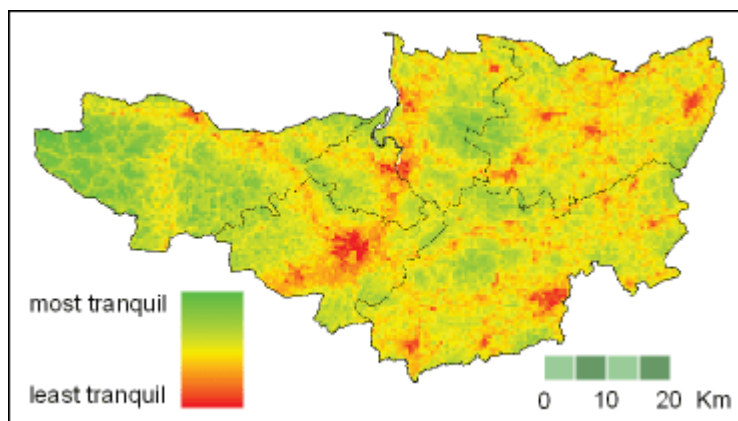
- High Street.

The Department of Environment, Food and Rural Affairs (Defra) noise mapping project referenced below addresses some of the sensitive routes in other areas of the county.

The issue of the effect of noise on the tranquillity of the countryside is of relevance to the South West of England. The Campaign to Protect Rural England (CPRE) has produced noise maps of tranquil areas which are shown in Figure TP1.3 below.

(<http://www.cpre.org.uk/campaigns/landscape/tranquillity/national-and-regional-tranquillity-maps/county-tranquillity-map-somerset>).

Figure TP1.3: Tranquil Areas in Somerset



(Crown copyright. All rights reserved. The Countryside Agency 2006. Licence No. 100018881)

The influence of the road network on noise can be clearly seen on Figure TP1.3.

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.

Defra has recently started the process of noise mapping. The noise maps currently produced focus on large urban areas, major transport sources, and significant industrial sites.

In Somerset a number of draft noise maps have been produced and highlight the following areas where further investigation is needed (please note that the noise maps have not been included because at the moment they lack detail and are only in draft):

- Stretches of the M5 around Taunton, Bridgwater and Puriton;

- Stretches of the A38 including between Wellington and Taunton, on the North side of Taunton, on the South side of Bridgwater and near Burnham on Sea near Brent Knoll);
- Stretches of the A358 including to the East of Taunton at Henlade and Ruishton;
- Stretches of the A303 near South Petherton and Stoke Sub Hamden, at Chicklade and to the East of Ilchester;
- The A3088 on the West side of Yeovil;
- The A37 to the North of Yeovil; and
- The A39 through Walcott and to the South of Glastonbury;

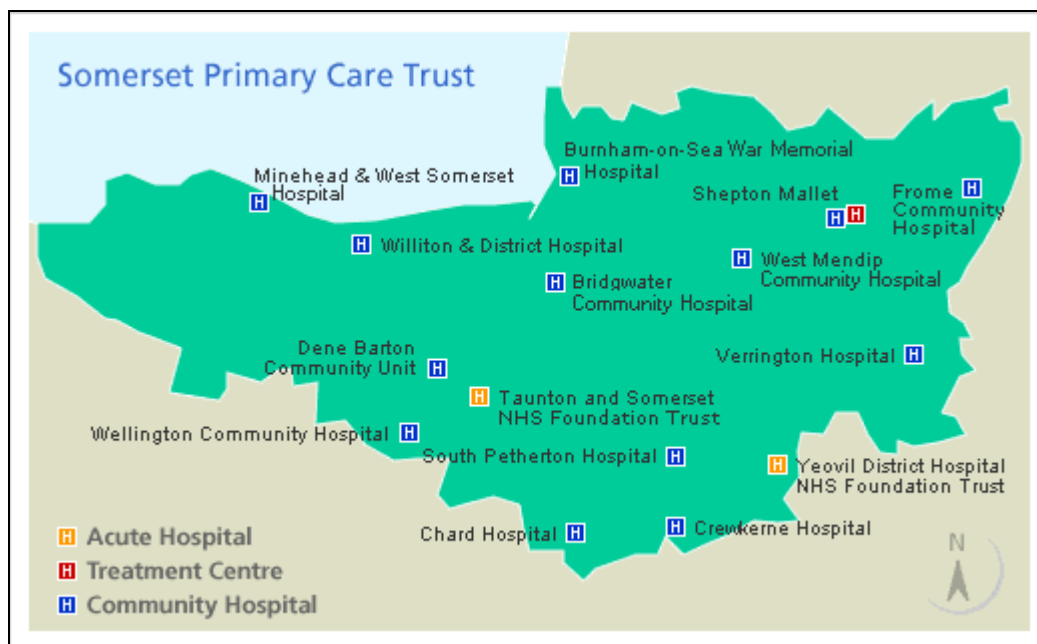
Further details on the noise mapping and noise action plan process will be included in the Environmental Report as it becomes available.

4.4 Health Facilities in Somerset

NHS Somerset was established on 1 October 2006, replacing the four former Primary Care Trusts, Taunton Deane, Somerset Coast, Mendip and South Somerset. West Somerset was covered previously by the Somerset Coast PCT.

The main acute hospital covering Somerset is Musgrove Park in Taunton and there are a number of community hospitals dealing with outpatient clinics, maternity and minor injuries. Figure TP1.4 shows the locations of the main health facilities in Somerset.

Figure TP1.4: Health Facilities in Somerset



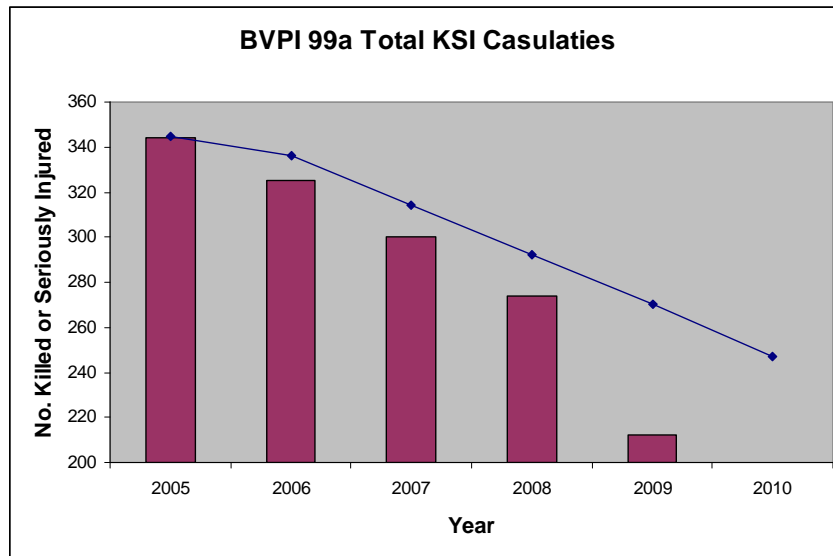
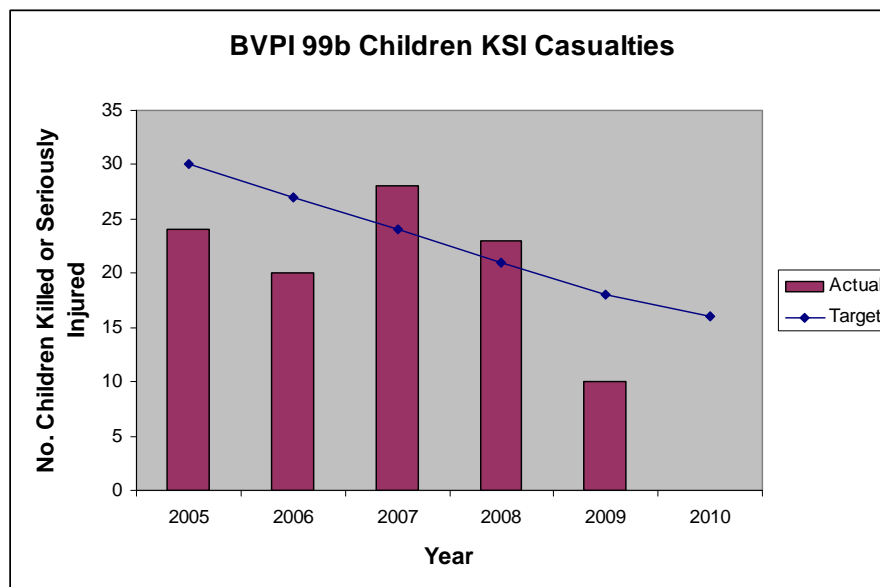
(Source: Somerset NHS Primary Care Trust, Joint Strategic Needs Assessment, 2006)

Please note that the accessibility topic paper discusses access to health care facilities in more detail.

4.5 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 LTP2 Annual Progress Report, total KSI accidents are performing well and are below target but children KSI accidents have been above target for the last two years. The latest figures and comparison to targets are presented in Figures TP1.6 and TP1.7. Please note that the 2009 data is for the period up to 31 May 2009.

A further 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 Somerset to confirm these assertions.

Figure TP1.6: Total KSI Casualties (2009 data for the period up to 31/05/2009)**Figure TP1.7: Total Child KSI Casualties (2009 data for the period up to 31/05/2009)**

An additional indicator reviews slight injuries on Somerset's roads. The target for this indicator for the period of 2001-2006 has remained largely unchanged. More recently, during 2007, there has been a reduction in slight injuries.

Table TP1.2 illustrates the number of people KSI according to user type. This information is collated by the Road Safety Partnership which was formed in 2006 to drive KSI numbers down and improve quality of life. The Road Safety Partnership includes a number of partners including the County Council and the Highways Agency.

Table TP1.2: Number of People KSI per User Type

	94-98 average	2002	2003	2004	2005	2006	2007
Pedestrians	57	41	48	40	41	38	47
Pedal cycles	28	18	19	13	24	21	16
Powered two wheelers	60	68	65	71	77	88	72
Cars/taxis	218	204	206	212	182	160	153
Goods vehicles	10	11	7	4	11	10	5
Other users	7	9	7	5	9	8	8
TOTAL	380	351	351	345	344	325	301

The figures show that in general travel in Somerset is getting safer. Some key headlines are:

- Pedestrian accidents rose in 2007;
- Pedal cycle accidents are reducing as are car accidents and goods vehicles; and
- Powered two wheeler accidents are higher than in 1994-1998 but are reducing from a peak in 2006.

The Road Safety Partnership has agreed on a three year delivery plan to drive KSI numbers down. During 2007 and 2008 there have been 25 local safety engineering schemes such as assisting with school travel plans and school front safety.

4.6 Physical Fitness and Health in Somerset

According to the NHS Annual Health Survey for England (2007), between 1993 and 2007 the proportion of adults with a normal Body Mass Index (BMI) decreased from 41% to 34% among men and from 50% to 42% among women. Among men the proportion who were overweight (BMI 25 to less than 30) decreased from 44% in 1993 to 41% in 2007.

However, there was a marked increase in the proportion of adults who were obese, a proportion that has gradually increased over the period examined. The proportion who were categorised as obese (BMI 30 or over) increased from 13% of men in 1993 to 24% in 2007 and from 16% of women in 1993 to 24 %in 2007.

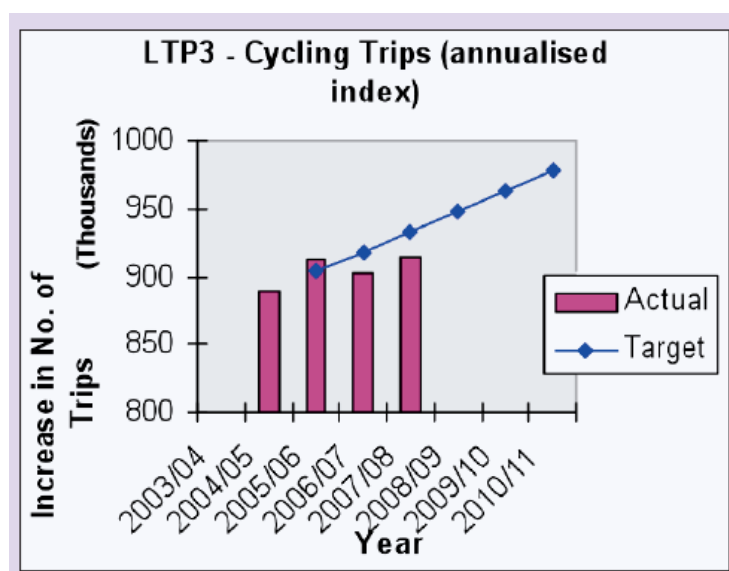
Work on obesity in Somerset is being driven by the Somerset Obesity Forum, a multi agency steering group. The Somerset Obesity Forum has targets specifically for childhood obesity and Table TP1.3 below sets out the current performance for childhood obesity in Somerset as identified by the Somerset Obesity Forum.

Table TP1.3: Obesity Amongst Schoolchildren

	Current Performance 2007-2008	Target 2008-2009
Reception year	Obesity: 8.7%	Obesity: 8.67%
Year 6	Obesity: 15%	Obesity: 14.86%

The Somerset Active People's survey showed that in Somerset only 21.9% of adults took part in at least three sessions of activity a week (Somerset NHS Primary Care Trust, Joint Strategic Needs Assessment, 2006).

According to the APR, Somerset has seen a 3% increase in cycling trips compared to a target of 10% increase in the 2004/2005 numbers. See Figure TP1.8.

Figure TP1.8: Cycling Trips

The APR does not monitor increase in walking as a whole in the county but does monitor increase in pedestrian activity in Taunton town centre (although this is more of an economic indicator). The latest APR found that there had been a 10% increase in pedestrian activity compared to 2006/2007.

The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008) sets out some statistics regarding walking and cycling in Taunton as follows:

- Levels of cycling and walking in the study area (which covers Taunton, Bridgwater and Wellington) are higher than the national average at 15% and this is probably due to the favourable topography of the area;
- Taunton is currently ranked 18th in the country for commuter cycling and levels of cycling have increased in Taunton and Bridgwater since 2003; and
- Walking is the most popular mode of travel to school with 48% of trips made by this mode.

The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009) sets out statistics for the Yeovil area as follows:

- 6% of people in Yeovil cycle to work but a very small number of pupils cycle to school (2% of secondary school pupils and less than 1% of primary school pupils); and
- Evidence suggests that walking is a popular choice for some activities – 14% of people walk to work and walking is the dominant mode of transport for schoolchildren – as high as 98% for some schools.

5 Data Sources and Gaps

5.1 Data Sources

- Joint Strategic Needs Assessment (Somerset NHS Primary Care Trust, 2006);
- Annual Health Survey for England (NHS, 2007);
- Taunton Transport Strategy Review 2 Final Report (Atkins, 2008);
- The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009);
- The Somerset Air Quality Strategy (2008);
- Somerset Local Transport Plan 2 (Somerset County Council, 2006);
- Somerset LTP2: Second Annual Progress Report (Somerset County Council, 2008);
- Making the Case: Improving Health through Transport (Health Development Agency, 2005); and
- 2001 census data.

5.2 Data Gaps

The following data gaps have been identified:

- Amount of walking trips in the key towns.

6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown in Table TP1.4. These issues will be used to guide the selection of the SA Objectives that the plan will be assessed against.

Table TP1.4: Issues and Future Baseline

Issue	Likely Future Baseline
The population is ageing and this needs to be considered in the provision of services and transport	There is predicted to be a 14% rise in the total population of Somerset by 2025. The population aged 65 and over is set to grow by 55% over the same period and the over 85s by 73% (Somerset NHS Annual Public Health Report, 2008/2009)
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.	<p>According to the Taunton Transport Strategy Review (which is looking at the area which will experience the most growth in traffic) forecast improvements in vehicle technology mean that emissions of local pollutants PM10 and NO_x are forecast to decrease in the future baseline despite forecast traffic growth. This may be assisted by schemes such as the Government scrappage scheme</p> <p>As a general rule for there to be a perceptible change in noise levels there has to be a change of 3dBA² which equates to a doubling or halving of traffic flow. The Taunton Transport Strategy Review (which is looking at the area which will experience the most growth in traffic) found that changes in annoyance associated with noise are generally small in scale for the future baseline with the exception of Fore Street/East Street in Taunton.</p>
Child road accident statistics are higher than target and pedestrian accidents have increased in the last year of data	<p>Severity of car accidents may decrease in the longer term due to improved vehicle design and increased safety awareness amongst the public.</p> <p>However, in the absence of the measures in the Somerset County Council Transport Policies the assumption needs to be that accident levels remain at a similar level at least in the short term</p>
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.	In the absence of measures in the Somerset County Council Transport Policies to promote walking and cycling, levels of walking and cycling are likely to decline. This will have a negative effect on obesity levels.

2 Reference: Guidance on Methodology for Multi Modal Studies, DfT, March 2000, Vol 2, Ch4, Para 4.3.5

7 Suggested SEA Objectives

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

Improving Health	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Improve the safety of the transport system?	<ul style="list-style-type: none"> • Lead to a decrease in traffic accidents /accident severity and help to meet KSI targets (link to LAA indicator NI 47 on road accidents)?
Make healthier modes of travel easier and more attractive?	<ul style="list-style-type: none"> • 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)?
Reduce the impact of the transport system on air and noise pollution?	<p>All the indicators will seek to contribute to the DfT goal to reduce the social cost of transport.</p> <ul style="list-style-type: none"> • 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 nature³ of traffic past sensitive receptors or on sensitive routes⁴ that would help to achieve WHO noise guidelines? • Reduce traffic in tranquil areas?

³ 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 (ie. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

⁴ Sensitive receptor refers to homes, schools and hospitals.



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Appendix 1 (Topic Paper 2
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3	The Influence of the Somerset County Council Transport Policies	5
4	Baseline Data	5
4.1	Crime and Transport Related Crime	5
4.2	Community Severance	7
4.3	Spatial Planning Strategy for Somerset	9
5	Data Sources and Gaps	10
5.1	Data Sources	10
5.2	Data Gaps	11
6	Sustainability Issues	12
7	Suggested SEA Objectives	12

1 Introduction

This is Topic Paper 2 of the SEA Environmental Report of the Somerset County Council Transport Policies (the equivalent of the Local Transport Plan). The topic paper addresses the potential issues of relevance to the Somerset County Council Transport Policies which are related to the RSS high level sustainability objective of¹:

Supporting communities that meet people's needs

There are five other Topic Papers that address:

- Improving health (Topic Paper 1);
- Developing the economy in ways that meet people's needs (Topic Paper 3);
- Provide access to meet people's needs with least damage to communities and the environment (Topic Paper 4);
- Maintain and improve environmental quality and assets (Topic Paper 5); and
- Minimising consumption of natural resources (Topic Paper 6);

This paper sets out:

- The policy context that the Somerset County Council Transport Policies will need to address;
- The influence that the Somerset County Council Transport Policies 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 Somerset County Council Transport Policies directly help 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 has been included below of the key documents that the Somerset County Council Transport Policies should help to deliver: the national transport goals, the Regional

¹ 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.

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 Somerset County Council Transport Policies.

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 improve 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:

- Enhance social inclusion and the regeneration of deprived or remote areas by enabling accessibility.

2.2 Regional Spatial Strategy (RSS)

The latest version of the RSS is the *Draft Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation* (July 2008). The RSS includes a number of relevant policies including (policy has been summarised):

Policy ADD1 Priorities for Addressing Deprivation and Disadvantage: Addressing deprivation and disadvantage to reduce intra-regional inequalities will require action at a number of levels. This will range from tackling multiple deprivation at the neighbourhood level, to addressing the gradient of productivity and incomes at the regional level. Critically this will also need to harness the role of prosperous areas with high levels of economic potential, as a process of ongoing economic development, in order to secure wider regional benefits.

LDDs should identify and seek to address pockets of deprivation at the neighbourhood level in both urban and rural communities.

2.3 Sustainable Community Strategy and Local Area Agreement

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

- Making a positive contribution;

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

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

- Aim 1: Making a Positive Contribution: The vision for 2026 – People of all ages and walks of life are valued
- Relevant challenges highlighted under Aim 1 are:
 - Strengthen the leadership given by councils and partners through closer working together and engage local people and communities in decision making; and
 - Widen and strengthen the involvement of local people in their communities.

Relevant targets are:

- Increase the percentage of people who feel that they can influence decisions in the area in which they live; and
- Increase the involvement of people in public activities in the local area.

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 1 % of people who believe people from different backgrounds get on well together in their local area.

Table TP2.1: Community: General Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
International documents	
No relevant documents	NA
National documents	
No relevant documents	NA
Regional documents	
No relevant documents	NA
Local documents	
<p>Somerset Crime Reduction and Drugs Strategy - 2005/08 (Somerset Drug and Alcohol Action Team and Somerset's Crime and Disorder Reduction Partnerships, 2005)</p> <p><i>Please note that there is no information available to indicate that this document has been updated. Therefore it has been necessary to assume that the objectives and targets within this document are still relevant</i></p>	<p><u>Objectives</u></p> <p>Fear of Crime: to reduce the fear of crime in Somerset and reassure the public, through the creation and implementation of a multi-agency action; and to monitor the performance of the action plan to March 2008</p> <p>Anti-social behaviour: to reduce anti-social behaviour and the criminal damage associated with it; and to increase public confidence</p> <p><u>Targets</u></p> <p>A 10% reduction in the fear of crime across Somerset by March 2008</p> <p>To reduce anti-social behaviour by 15%* in Year 1: 4%; 5% in Year 2 and 6% in Year 3</p> <p>*Baseline: 704 criminal offences 2003-2004)</p>

3 The Influence of the Somerset County Council Transport Policies

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

- Helping to improve the quality of urban and rural centres through reducing and managing traffic and the impacts of the road system and supporting land use / growth plans;
- Through improving the security of road users, pedestrians and cyclists; and
- Reducing the community severance effects of transport.

(Please note that economic, transport safety, noise impact and accessibility issues are addressed in other topic papers).

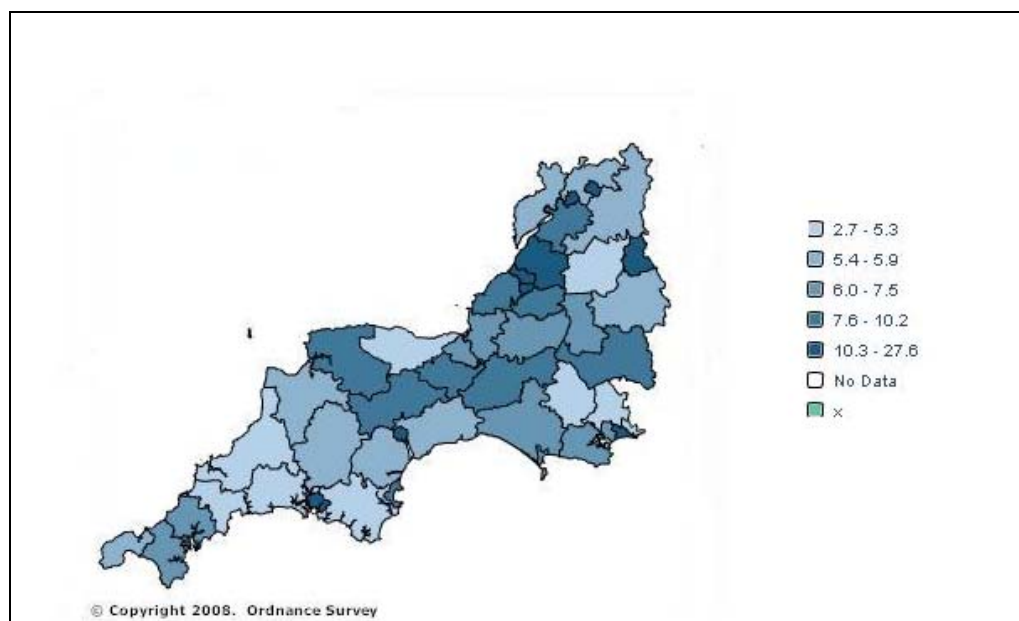
4 Baseline Data

4.1 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 TP2.2 for all the districts in Somerset. The table shows that the general trend in overall crime is down in Somerset (although there was an increase in 2006/07).

Table TP2.2: Total Crime per 1000 Population				
Area	2004/2005	2005/2006	2006/2007	2007/2008
West Somerset	63.6	60.6	66.9	51.2
Sedgemoor	79.9	69	80.2	65.7
Mendip	77.1	64.4	67.5	62.3
Taunton Deane	86.6	73.8	80.4	76.5
South Somerset	78.2	64.7	68.7	64.1

The Instant Atlas also includes data on offences against vehicles. The 2007/2008 data is shown in Figure 1. Taunton Deane and South Somerset have fairly high levels of car crime compared to other areas in the South West.

Figure TP2.1: Vehicle Related Crime 2007/08 (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 TP2.3 shows these results for all the districts in Somerset.

Table TP2.3: % of residents who feel safe (2005/2006)					
(figures in brackets are the 2003/04 figures)	West Somerset	Sedgemoor	Mendip	Taunton Deane	South Somerset
% of residents who say that they feel fairly safe or very safe during the day	97.7 (96.9%)	97.2% (96.9)	97.2% (96.9)	97.2% (96.9)	97.2% (96.9)
% of residents who say that they feel fairly safe or very safe outside after dark	70.8% (70.3%)	72.18 (70.3)	72.18 (70.8)	72.18 (70.3)	72.18 (70.3)

(Source: Audit Commission 2005/2006 (latest data available) see <http://www.areaprofiles.audit-commission.gov.uk>)

This compares to average UK figures as follows:

- 70.18 % of residents 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 who say that they feel fairly safe or very safe during the day (down from 97.48% in 2003/04).

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

Work has also been undertaken through the Somerset Place Survey on people's opinions of anti-social behaviour. Table TP2.4 reports these results.

Table TP2.4: Somerset Place Survey Results 2008					
Indicator	NI 21	NI 22	NI 23	NI 27	NI 41
	% who think that anti-social behaviour is a problem in their local area	% who agree that the police and other local public services are successfully dealing with anti-social behaviour and crime in their local area	% who think there is a problem with people not treating each other with respect and consideration in their local area	% who agree that the police and other local public services seek people's views about anti-social behaviour and crime in their local area	% who think that drunk and rowdy behaviour is a problem in their local area
SW	15.3	27.9	24.9	24.8	26.1
England	20	26.3	31.2	24.8	29
Mendip District Council	16.9	26.6	26.6	22.3	27.6
Sedgemoor District Council	15.9	29.6	26.9	28.5	26
South Somerset District Council	15.1	23.7	27.4	21.3	25.4
Taunton Deane Borough Council	10	29.7	23.3	27.9	22.4
West Somerset Council	13.3	30.7	21.3	30.8	26.2

(Source: Somerset Place Survey 2008)

In general people in Somerset are more positive about levels of anti social behaviour and the work that is happening to tackle it than people in other areas of the region or the country.

4.2 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*. Table TP2.5 (taken from The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008)) shows how daily traffic flows would change by 2026 under Base Case conditions along what they have termed environmentally sensitive roads, and hence the impact on severance.

Table TP2.5 Base Case Daily Traffic Flows on Sensitive Roads, 2026		
Road	2026 Base Case daily flow (2-way)	Change from 2006
Taunton		
A3065 Silk Mills Road/Lane	15819	7%
A358 Greenway Road	12985	2%
A358 Priorswood Road	25840	57%
A38 Victoria Parkway	19654	-8%
A38 Wellington Road/ Wellington New Road	15920	6%
North Street	10338	-31%
Corporation Street	18346	8%
Fore Street/ East Street	12855	123%
Priory Bridge Road	14199	84%
A3038 Station Road/Kingston Road	14446	70%
Shuttern/Upper High Street/ St Mary Street	15037	-9%
Bridge Street	21414	60%
Third Way	16802	N/A
Bridgwater		
A38 Taunton Road	28330	34%
A372 Westonzoyland Road	14273	39%
A39 Bath Road	15989	32%
A38 Bristol Road	10731	1%
A39 Quantock Road	14733	24%
Wellington		
High Street	6483	-38%

(Source: Taunton Transport Strategy Review 2 Final Report (Atkins, 2008))

In general, traffic flow and severance is predicted to increase within Taunton and Bridgwater town centres between 2006 and 2026. Some of the largest increases are forecast to occur on Priorswood Road, Fore Street, East Street, Priory Bridge Road, Station Road, Kingston Road and Bridge Street in Taunton. Some reductions in flow are forecast most notably on North Street in Taunton. These changes are seen as being heavily influenced by the presence of the Third Way (Inner Relief Road) and the diversionary effects this is forecast to have on town centre traffic.

Most of the remaining links record fairly small changes in flow – both positive and negative. These include Silk Mills Road, Greenway Road, Victoria Parkway, Wellington Road, Corporation Street and Upper High Street/St Mary Street in Taunton.

All routes in Bridgwater included in Table TP2.5 would experience an increase in daily traffic flow. Traffic flows on High Street, Wellington are forecast to fall primarily as a result of constructing the Longforth Farm distributor road.

The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009) does not directly address severance but does outline the five busiest corridors in terms of two way traffic volumes. These are:

- Sherborne Road;
- A3088 Alvington;
- A37 Dorchester Road;
- A37 Ilchester Road; and
- A30 West Coker

4.3 Spatial Planning Strategy for Somerset

Until the beginning of July when Regional Spatial Strategies were revoked, the spatial planning strategy for Somerset was set through the RSS. The key policies in this regard were:

- Policy CSS - The Core Spatial Strategy;
- Development Policy A - Development at the Strategically Significant Cities and Towns (SSCTs);
- Development Policy B - Development at Market and Coastal Towns; and
- Development Policy C - Development in at Small Towns and Villages.

In summary the spatial strategy for Somerset was as follows:

- The primary focus for development will be the Strategically Significant Cities and Towns (SSCTs). In Somerset these are Bridgwater, Taunton and Yeovil. This includes two urban extensions in Taunton, one urban extension in Bridgwater and an extension of Yeovil town. Significant development is also expected within the existing fabric of each of the towns ;
- Development in market and coastal towns should be smaller scale and these towns should be focal points where locally significant scales of development can occur. It is the role of LDFs to identify these Policy B towns but it is likely that the Category B towns will be similar to those identified in the Somerset Structure Plan as towns (these are Frome, Glastonbury, Shepton Mallet, Street, Wells, Bridgwater, Burnham-on-Sea and Highbridge, Chard, Crewkerne, Ilminster, Wincanton, Yeovil, Taunton, Wellington and Minehead); and
- Development in small towns and villages will be on a small scale to meet the needs of the settlement and catchment area.

The system of RSS has now been replaced by a localism agenda where local authorities are responsible for establishing the level of local housing provision in their area. There is currently a high degree of uncertainty regarding what decisions local authorities may make. Some authorities may decide to retain their existing housing targets that were set out in the revoked Regional Strategies. Others may decide to review their housing targets. Some information has been provided to the consultant team based on the most likely scenario for each area in Somerset. Likely strategic development areas are now well established and it is considered sensible to continue planning for the long term. The Somerset County Council Transport Policies therefore assume that strategic sites will come forward at some point in the future, (although some areas will be beyond 2026), and recognises that the precise location and scale of development at individual sites will evolve over the next few years. It is likely, therefore, that growth numbers over the lifetime of this Somerset County Council Transport Policies may be lower than those outlined below. As areas are brought forward for delivery, each site will need to be tested and reassessed proportionately on a case-by-case basis to determine the level and scale of transport intervention required to deliver the objectives of this strategy.

Taunton, Bridgwater and Wellington: Local Planning Authorities have been planning on the basis of local evidence of housing need and national housing requirements for the area to 2026 which suggested 7,700 new homes and 7,500 new jobs in Bridgwater, 18,000 new homes and 16,500 new jobs in Taunton, and 3,800 new homes in the rural remainder of Taunton Deane, including Wellington.

Yeovil: A number of significant housing and employment developments are anticipated to take place in Yeovil over coming years, although there is uncertainty over the absolute numbers and phasing of this development. As a result of this uncertainty, planning for this growth is at an embryonic stage.

Other areas within Somerset: On the basis of existing information, Frome, Glastonbury, Shepton Mallet, Street, Wells, Bridgwater, Burnham-on-Sea and Highbridge, Chard, Crewkerne, Ilminster, Wincanton, Yeovil, Taunton, Wellington and Minehead are likely to be the focus of locally significant scales of development. Development in small towns and villages will be on a small scale to meet the needs of the settlement and catchment area.

5 Data Sources and Gaps

5.1 Data Sources

- The Draft Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation July 2008;
- Home Office Instant Atlas <http://www.homeoffice.gov.uk/rds/ia/atlas.html>;
- Audit Commission <http://www.areaprofiles.audit-commission.gov.uk>;
- Taunton Transport Strategy Review 2 Final Report (Atkins, 2008);
- The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009);

- Chief Planning Officer Letter: Revocation of Regional Strategies (CLG, 6th July 2010); and
- Somerset Place Survey (2008).

5.2 Data Gaps

The following data gaps have been identified:

- Future traffic levels and severance levels outside Taunton, Bridgwater and Wellington; and
- People's views on how severe the community severance is that they experience.

6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown in Table TP2.6. These issues will be used to guide the selection of the SA Objectives that the plan will be assessed against.

Table TP2.6: Issues and Future Baseline	
Issue	Likely Future Baseline
People generally feel safer in Somerset and feel that anti social behaviour is less of an issue than people in the UK on average	There are so many factors driving this issue the future baseline is impossible to predict
Community severance caused by large volumes of traffic	The spatial strategy for Somerset will mean that most development occurs in SSCTs (Taunton, Bridgwater and Yeovil) and category B towns (most of the larger towns in the county. In the absence of the Somerset County Council Transport Policies severance in these communities is likely to increase and will affect the quality of the townscape in those areas
Development in Somerset will occur mainly in SSCTs and Category B towns and adequate transport is needed to support this	In the absence of measures promoted through the Somerset County Council Transport Policies development will not be supported by adequate sustainable transport and will cause future problems of pollution and congestion

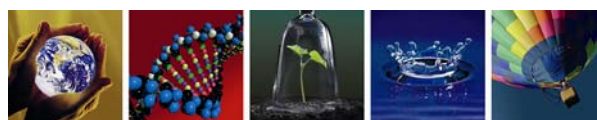
7 Suggested SEA Objectives

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

Communities	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Help to improve the quality of urban and rural centres?	<ul style="list-style-type: none"> • Reduce traffic levels, congestion or the nature of traffic² 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?

² 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 (ie. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

Communities	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
	<ul style="list-style-type: none"> • Support the spatial strategy for the area including providing improvements to transport in rural areas?
Improve the security of the transport system?	<ul style="list-style-type: none"> • 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? <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>
Reduce the community severance effects of transport?	<ul style="list-style-type: none"> • Result in a reduction in community severance (i.e. improved crossing facilities, reduced traffic speed, reduced traffic levels)?



Somerset County Council
the Somerset County Council
Transport Policies Strategic
Environmental Assessment
Environmental Report



Appendix 1 (Topic Paper 3
Economy)

Prepared for:
Somerset County Council
Taunton

Prepared by:
ENVIRON
Exeter, UK

Date:
October 2010

Project or Issue Number:
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Table of Contents

1	Introduction	1
2	Policy Context	1
2.1	National Transport Goals	2
2.2	Regional Spatial Strategy (RSS)	2
2.3	Sustainable Community Strategy and Local Area Agreement	3
3	The Influence of the Somerset County Council Transport Policies	6
4	Baseline Data	6
4.1	Introduction	6
4.2	Somerset's Transport and Communications Infrastructure	6
4.3	Commuter Patterns	7
4.4	Major Schemes	9
4.5	Congestion and Traffic Flows	9
4.6	Visitor Access	14
4.7	Network Management	14
4.8	Freight Management	15
5	Data Sources and Gaps	17
5.1	Data Sources	17
5.2	Data Gaps	17
6	Sustainability Issues	17
7	Suggested SEA Objectives	18

1 Introduction

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Developing the economy in ways that meet people's needs

There are five other Topic Papers that address:

- Improving health (Topic Paper 1);
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- Provide access to meet people's needs with least damage to communities and the environment (Topic Paper 4);
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- Minimising consumption of natural resources (Topic Paper 6);

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- The policy context that the Somerset County Council Transport Policies will need to address;
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- Review of available baseline data;
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- Sustainability issues identified and future trends; and
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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 Somerset County Council Transport Policies directly help 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 has been included below of the key documents that the Somerset County Council Transport Policies should help to deliver: the national transport goals, the Regional

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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 Somerset County Council Transport Policies.

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:

- The focus should be on improving the performance of existing networks, by targeting additional capacity on where this is needed to meet growing demand; and
- Transport plans need to be co-ordinated 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 Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation* (July 2008). The RSS includes a number of relevant policies including (the policies have been summarised):

Policy ES1 Sustainable Economic Prosperity: Public and private sector organisations should address measures to promote a switch from employment-led to productivity-led growth. These measures should include:

- Guiding investment to locations where it will have maximum benefit and reduce the need to travel recognising
 - the role of the region's large urban areas as key drivers of productivity;
 - the need to support and diversify the rural economy and promote sustainable communities; and
 - the need to achieve successful regeneration as well as ongoing economic development.

Policy TC1 City and Town Centres: In order to meet the needs of local communities agencies will work together to ensure that the vitality and viability of the region's existing network of towns and city centres is maintained and enhanced. In doing so, it will be important to ensure that such centres are not adversely affected by inappropriate development elsewhere, and that provision is made for a mix of uses within town centres, including retail, cultural facilities, offices, other employment and housing.

The RSS also discusses tourism and transport in its supporting text stating that the transport implications of an increase in visitor numbers to the region merit continuing consideration. This is because a high proportion of tourism product is rurally based, site specific and difficult to access by means other than the car. In areas where car borne visits are the only practical transport solution, consideration should be given to how to reduce travel in and around the location of stay by the creation of more activities for visitors in the locality.

2.3 Sustainable Community Strategy and Local Area Agreement

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

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

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

- Aim 3: Ensuring Economic Well Being: The vision for 2026 - Somerset is a place with high value and secure jobs and people are confident that their children have good career prospects.
- Relevant challenges highlighted under Aim 3 are:
 - Broaden and strengthen the local economy; and
 - Plan for new sustainable communities to be built in Somerset.

Relevant targets are:

- Increase the overall employment rate

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 151 Overall Employment Rate.

Table TP3.1: Economy: General Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
International documents	
None	NA
National documents	
<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: 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>
Regional documents	
<p>Just Connect! An Integrated Regional Strategy for the South West 2004-2026 (South West Regional Assembly, 2005)</p> <p>South West Regional Economic Strategy (SWRDA,</p>	<p>Just Connect: The strategy sets out five general aims including enhancing economic prosperity and quality of employment opportunity and addressing deprivation and disadvantage</p> <p>Regional Economic Strategy: Sets out a number of targets including increased availability of workspace in rural areas; an increase in organisations signing up to the Sustainable Construction</p>

Table TP3.1: Economy: General Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
2006) Towards 2015 - Shaping tomorrow's tourism (South West England, 2005)	Charter; an increase in number of social enterprises; and changes to provision in rural areas that result in increased numbers of employers and employees participating in training and development Shaping Tomorrow's Tourism: Tourism in the future will need to take into account trends such as increased interest in holidays which promote good health and well-being and increasing concern for the environment resulting in more demand for destinations which preserve and promote their natural assets
Local documents	
Somerset Economic Strategy (Somerset County Council, no date given)	<p>Somerset Economic Strategy: Below are listed the relevant strategic objectives</p> <ul style="list-style-type: none"> • Objective 2 - To maximise the long term investment attractiveness and dynamism of Somerset's economy • Objective 4 - To realise the potential of Taunton, Yeovil and Bridgwater as economic growth centres for Somerset and the region • Objective 5 - To revitalise the economy of Somerset's market towns and rural communities • Objective 6 – To increase access to economic opportunities for all Somerset residents

3 The Influence of the Somerset County Council Transport Policies

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

- Maintain and manage the existing transport system to reduce congestion and delays;
- Provision of transport improvements that support the economy through improving accessibility, journey times and reducing congestion;
- Provision of access to rural areas for residents and visitors; and
- Provision of alternatives to road freight and balancing the needs of the economy and communities by providing adequate freight routes.

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 and the latest economic data has shown that Somerset's economic growth is lagging behind national and regional levels (Somerset Economic Digest, March 2009). This change in economic fortunes makes trends (and therefore, the future baseline) especially difficult to predict.

4.2 Somerset's Transport and Communications Infrastructure

The following information is taken from the Somerset Economic Strategy. Somerset's largest centres (Taunton, Yeovil and Bridgwater) are well connected to the national road and rail network and enjoy good external accessibility, particularly to the key markets of London and South East England. Strategic communications include the M5, the A303 trunk route, direct rail links to London Paddington (from Taunton) and London Waterloo (from Yeovil).

Somerset's dispersed geography means that transport accessibility is a key issue for the remainder of the county. Somerset has a relatively limited local road network meaning that rural communities face problems of access to larger service and employment centres within the county and beyond. A particular issue, given their significant economic role, is the limited accessibility of many market towns in Somerset. Problems include their weak connections to the strategic M5 and A303 routes (and indeed from the Mendip towns to the M4) and the fact that a number of Somerset's market towns and rural centres have limited, if any, rail connections.

Somerset also enjoys proximity to growing international airports at Bristol and Exeter. While Somerset does not, as a whole, experience significant traffic congestion, the effect of increasing congestion on business activity in Taunton (particularly), Yeovil and Bridgwater is a concern for the future growth of these towns.

Broadband and information and communications technology (ICT) developments offer great potential to business development, particularly for a rural economy such as Somerset. The expansion of broadband infrastructure was initially slower across Somerset than both regionally and nationally. This reflected the rural geography of the county. BT's roll-out of ADSL broadband has rapidly improved the situation and all except three of Somerset's 91 BT exchanges will be commercially enabled. There are outstanding issues of broadband infrastructure provision in some rural communities and of awareness and take-up of broadband among Somerset businesses. It is important to ensure that Somerset does not lag behind in future ICT developments if growth in added value and knowledge based activities in the Somerset economy is to be achieved.

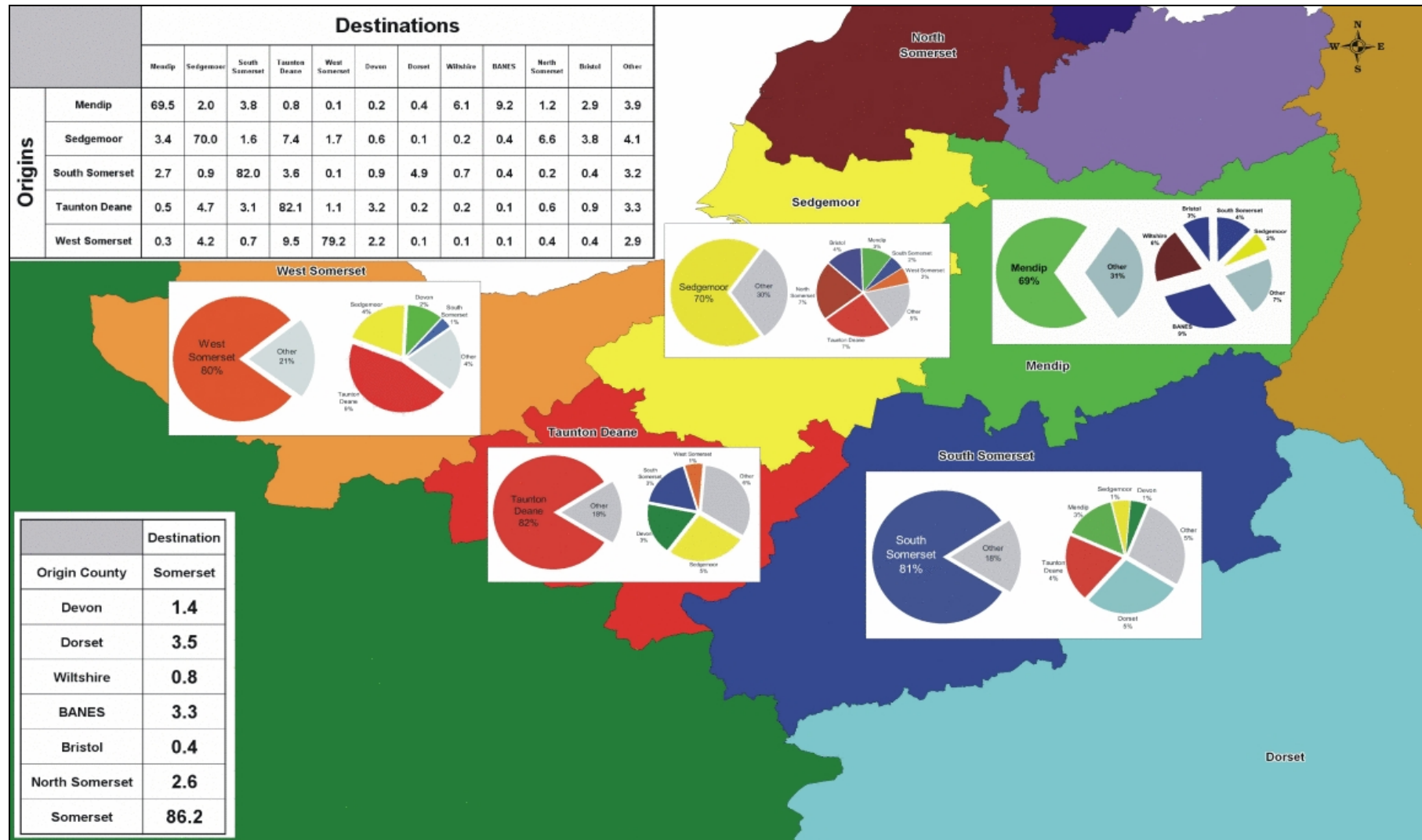
4.3 Commuter Patterns

A very obvious way that transport supports the economy is through enabling people to get to work. Figure TP3.1, taken from the LTP2 shows the journey to work patterns for Somerset.

It is clearly evident that the travelling habits of Somerset's commuters are complex. The majority of work based trips occur internally within districts, for example 69% of trips in Mendip are intra district trips, in comparison to 82% in Taunton.

Up to 31% of journey to work trips take place between local authority boundaries. Somerset has strong commuting connections with a number of its bordering local authorities. For example in Mendip, 6% of Somerset commuters travel to Wiltshire and a further 9% to Bath and North East Somerset. Sedgemoor has close connections with North Somerset (7% of total journeys), whilst South Somerset has close links with Dorset (5%). In addition to these out of county movements, residents from adjacent counties also commute to Somerset for employment and education.

Figure TP3.1: Journey to Work Patterns



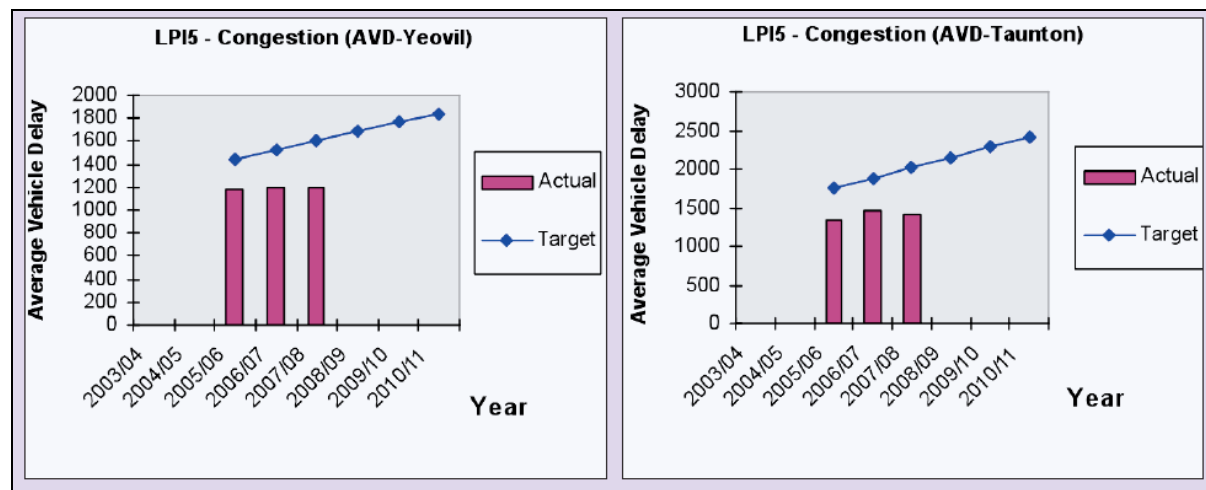
4.4 Major Schemes

In March 2009 the South West 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 South West and other parts of the Country. The programme confirms previous commitments to schemes due for construction between 2009 and 2014, and introduces some new schemes to the later years of the programme. Somerset County Council has developed a number of transport scheme proposals which have been included in the regional programme, subject to the approval of a major scheme business case, and these are listed below:

- Yeovil A30 Eastern Corridor Package: To improve the operation and capacity of the A30 corridor through Yeovil in order to accommodate future urban area development levels and improve severance and air quality;
- A38 Corridor Package Bridgwater to Taunton: To improve the operation and capacity of the A38 corridor in order to accommodate future development, avoid adverse impact on the M5 and to maximise public transport movement between the settlements;
- A358/A303 Corridor Package: To provide improved resilience to the regional network and reliability of longer distance journey times to maintain suitable conditions for economic growth;
- Major Maintenance Scheme A358. M5 Junction 25 to A303 Southfield's Roundabout, Ilminster: To provide improved road condition, reduction in disruption to road users and associated congestion and delay in the longer term;
- North East Taunton Urban Growth Infrastructure: To provide improvement in the operation and capacity of a critical junction on the A38 and A358 corridors in Taunton in order to accommodate future development levels including an urban extension at Monkton Heathfield and regeneration of key town centre regeneration sites such as Firepool; and
- Taunton Thirdway and Northern Inner Distributor Road: To improve access to enable redevelopment to proceed in the town centre regeneration areas so that there are appropriate levels of employment and service provision to meet the needs of the projected population growth.

4.5 Congestion and Traffic Flows

According to the latest LTP Annual Progress Report congestion is actually lower than the target level (indicator LPI5). Figure TP3.2 illustrates the congestion target and actual levels for Yeovil and Taunton.

Figure TP3.2: Congestion in Taunton and Yeovil

(Source: Somerset LTP2 Annual Progress Report 2 (Somerset County Council, 2008))

It is thought that the main reason that congestion is below target is due to the economic downturn and the fact that planned housing sites have not been bought forward.

The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008) discusses congestion in the study area (which covers Taunton, Bridgwater and Wellington). The report states:

- Three junctions in Taunton have been highlighted as being either close to or over capacity in the AM and PM peak, whilst there are two junctions in Bridgwater; and
- The A3259/A38 junction to the north of Taunton has the most severe queuing with the link road (u-turn to Taunton) causing queuing on the A3259 for northbound traffic.

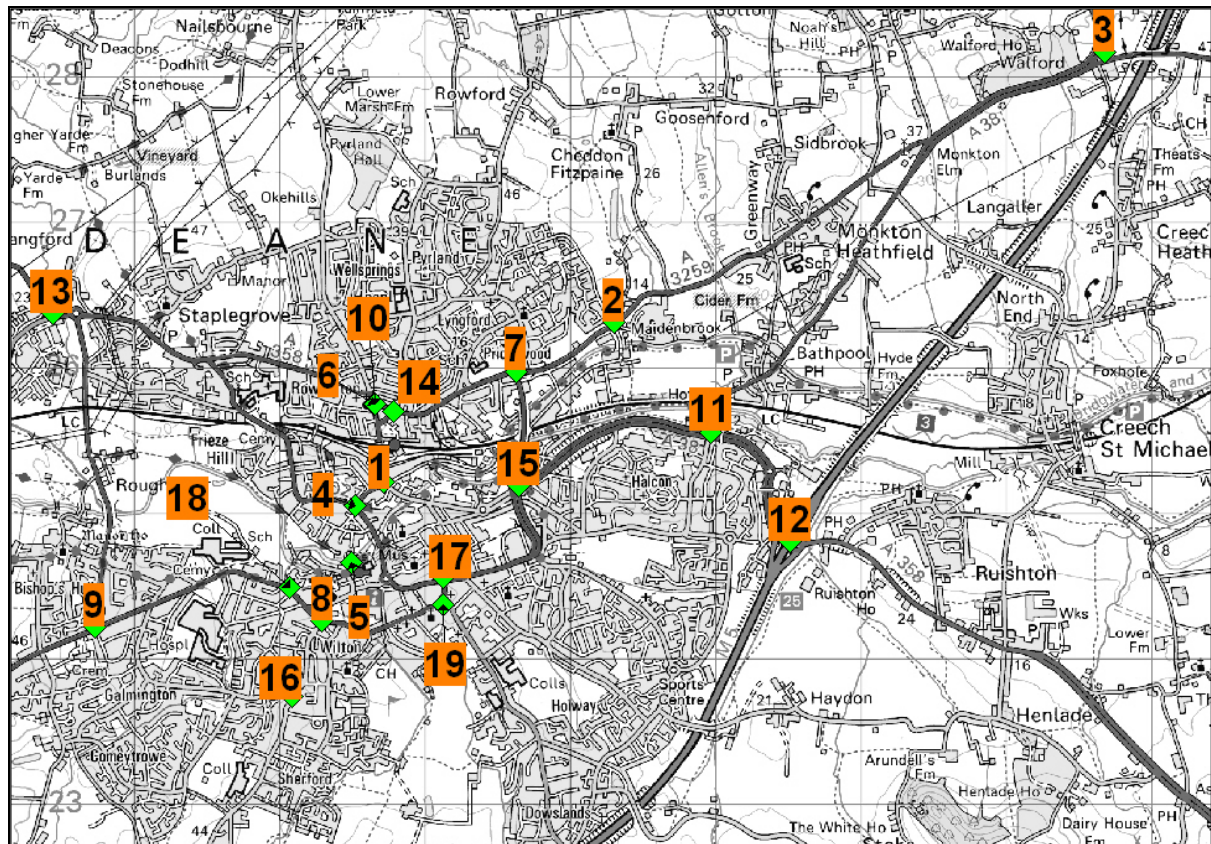
The Taunton Transport Strategy Review 2 Baseline Report (Atkins, 2007) includes a map which shows the 20 most congested junctions in Taunton. This is reproduced as Figure TP3.3.

The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009) identifies that most of the problems with congestion in Yeovil are at junctions and are experienced for only short periods. Most of the routes below experience some congestion for short periods of the day:

- The A30 Sherborne Road – Reckleford – Queensway – Hendford Hill – West Coker Road;
- Lysander Road – Western Relief Road – Bunford Lane – Western Avenue;
- A37 Dorchester Road and Ilchester Road;
- A359 Mudford Road;
- A3088 Lysander Road - Western Relief Road – Cartgate Link;
- Preston Road;
- Thorne Lane;
- Coombe Street Lane; and
- Lyde Road.

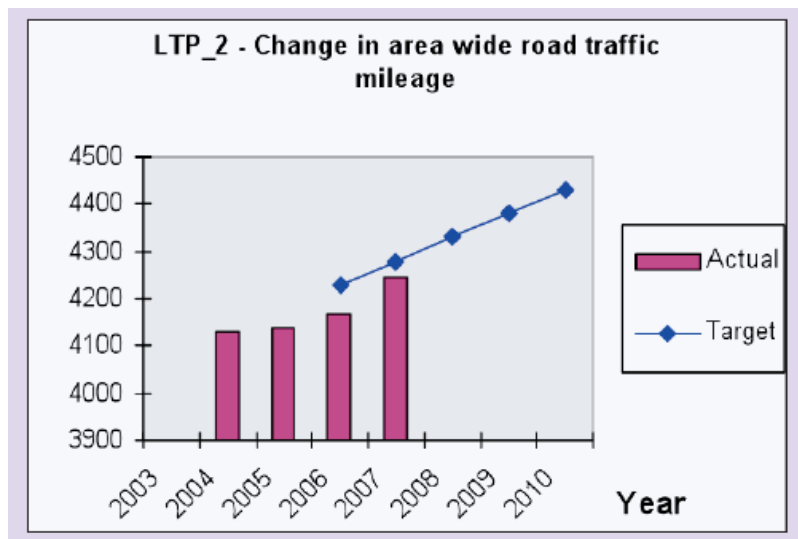
The exception is the A30 Sherborne Road that experiences congestion through much of the day.

Figure TP3.3: Junctions in Taunton with Queuing in Peak Periods



(Source: Taunton Transport Strategy Review 2 Baseline Report (Atkins, 2007))

According to the APR, the target for the area wide road traffic mileage is on track (see Figure TP3.4). This indicator reflects growth in traffic. This appears to be a volatile indicator as increases in fuel prices in late 2008 indicated that growth could potentially slow down and this was reported in the APR. However drops in fuel prices in 2009 could result in the rate of increase remaining unchanged.

Figure TP3.4: Area Wide Road Traffic Mileage

(Source: LTP2 Annual Progress Report 2 (Somerset County Council, 2008))

The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008) also discusses traffic levels in the study area, as follows:

Taunton

- The overall level of traffic in Taunton has increased between 2001 and 2006; and
- AADT flows show that several roads have lower levels of daily traffic, although these levels have fluctuated during this period.

Bridgwater

- AADT flows show that several roads have lower levels of traffic since the opening of the Northern Distributor Road, whilst others, such as The Drove which links the A38 to the Distributor Road, have seen an increase of over 100% in vehicle movements; and
- AADT data both show that 'rat-running' through Bridgwater has reduced since the opening of the Northern Distributor Road.

M5 AADT

- The level of traffic has remained broadly similar between 2002 and 2006.

The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009) also looks at traffic volumes and how they have changed from 2002-2009. The report states that:

- The two way 12 hour flow through the outer cordon has grown by 11.5% over 5 years and through the inner cordon by 2% over the same period;
- Growth has been highest in areas where there is less congestion; and
- A number of changes to the pattern of traffic flow in Yeovil has occurred since 2002 including the fact that there is less spare capacity in the inner cordon (which inhibits

growth) and the fact that development and hence traffic generation has been greater outside the inner cordon particularly adjacent to the western corridor.

Figures from the Annual Progress Report show that the majority of people still travel to work by car. Moving Forward is a campaign encouraging sustainable means of travel to work. The campaign has had a number of achievements including:

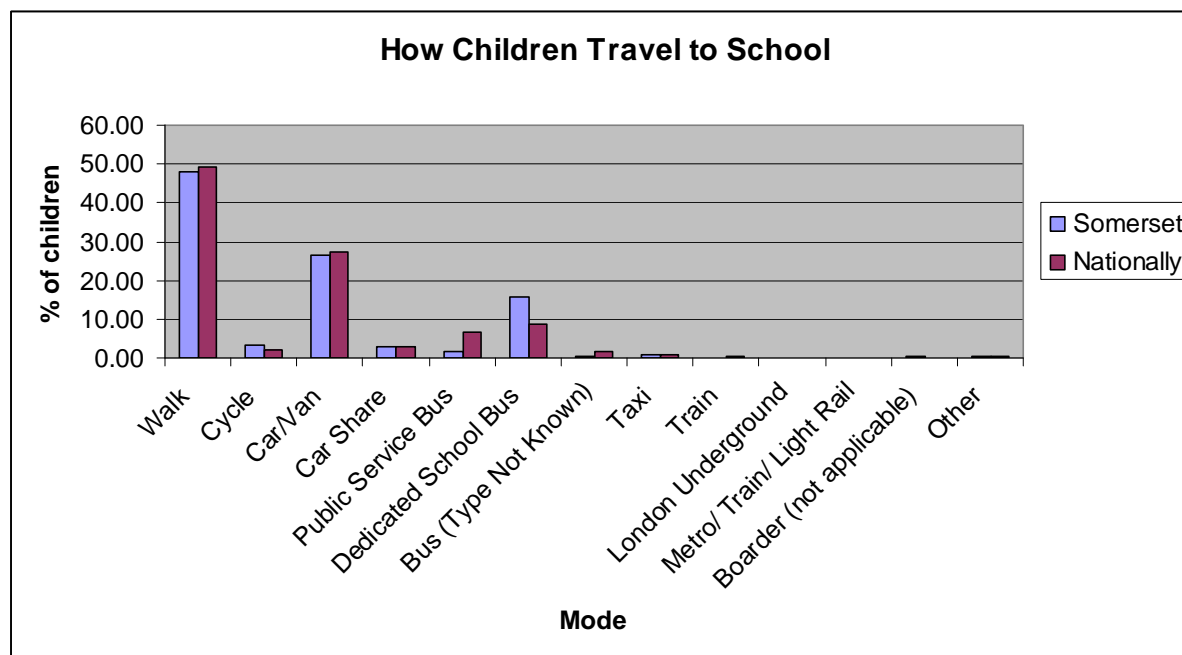
- Bike Repair and Ride services delivered at 34 businesses and colleges;
- Re-launch of the Car Share Somerset website with a new provider in January. Since then, sign-ups have continued to increase, buoyed by regular promotional campaigns;
- In Autumn 2008 an important new set of guidance on travel planning was launched – the Manual for Travel Plans;
- Worked with developers on 45 travel plans during 2008; and
- Conducted a survey of staff travel at County Hall and developed an online travel survey for use by external organisations;

In May 2008, Somerset's car sharing scheme had 1,754 members registered.

The latest results on travel to school show that 27.7% of pupils are taken to school by car; the target at this stage was 28%. According to the APR the results are satisfactory but prospective changes on school admissions may result in children being driven to school.

Figure TP3.5 below shows data regarding how children travel to school in Somerset and how this compares to nationally collected figures. The graph shows that a smaller proportion of Somerset pupils are driven to school by car, walk or travel by public service bus but that a larger number travel to school by school bus or cycle.

Figure TP3.5: School Travel (all pupils aged 5-16)



(Source: DfT's Mode Share of Journeys to School Census Data January 2008)

4.6 Visitor Access

The Somerset Visitors Survey will for the first time in 2009/10 include data on the method of transport people use to access attractions. Unfortunately this data is not yet available. The 2003 visitor survey did ask questions regarding how visitors arrived in Somerset and found that 80% of visitors to the county had travelled by car/van/motorcycle and that this was higher than the proportion visiting the UK as a whole (which was 60%). Far fewer visitors to the county had travelled by scheduled bus/coach service (6%) than the proportion for the UK as a whole (14%).

Staff at 'Visit Somerset' are involved in work to encourage people to use sustainable transport and have recently released a number of car free visitor itinerary leaflets.

4.7 Network Management

Somerset has recently published its Network Management Plan (June 2009). This document sets out how the County will deal with traffic related issues. In addition a Transport Asset Management Plan (TAMP) is being drafted to identify value for money and efficiency savings in the services the County provides. The Network Management Plan's main objective is to demonstrate that Somerset County Council is managing its own road network to secure the expeditious movement of all traffic and travel by:

- Considering the needs of all highway users and encouraging economical and environmentally sustainable use of the network;
- Forward planning and programming of all activities on the network;
- Making strategic improvements to the network and responding to genuine highway user concerns when funding is available;
- Effective co-ordination of all works on the highway including street works, highway maintenance and improvement works, developments, events, skips and scaffolding and any other activity affecting the highway;
- Proactive management of the highway and its operations through the development of a Traffic Operations Control Centre (TOCC), maximising the use of technology to inform, respond to and manage highway issues, including incidents on the network and weather conditions, with an aim to maintain journey time reliability (including public transport) on all major urban corridors; and
- Managing demand for on-street parking balancing the need for access to road side land uses with the objective of keeping traffic and people moving.

The ultimate aim is to improve network performance by keeping traffic and people moving, and Somerset County Council has identified a range of performance indicators that demonstrate this. This will be monitored through the LTP APR (mainly through the congestion and bus punctuality indicators) and the National Highways and Transport Public Satisfaction Survey www.nhtnetwork.org which examines how satisfied people are with issues such as efforts to reduce delays to traffic, time taken to complete road works, overall satisfaction with traffic levels and the routes used by HGVs.

4.8 Freight Management

The LTP2 indicator on freight is on track, according to the Annual Progress Report, with number of vehicles recorded on Somerset's non-strategic routes declining. It is likely that this decline is due to the economic downturn and is not a long term trend. The limitations and inappropriate routing of Satellite Navigation units used by HGV were identified in the 2007 South West Regional Freight Forum and Somerset County Council is involved in a national project on developing appropriate satellite navigation tools for freight. The forum is planning to expand electronic routing tools region-wide.

Figure TP3.6 illustrates the strategic freight routes in Somerset extracted from LTP2. The regional freight map is currently being updated. County freight routes include the A38, A39, B3224 and A72.

A key issue in terms of freight routing is that decisions made in other areas can affect Somerset and vice versa. Decisions made by other authorities recently are likely to have a detrimental effect on communities in Somerset including decisions made by neighbouring authorities which may increase HGV traffic through sensitive areas within the Somerset border.

Figure TP3.6: Regional freight routes (LTP2)



(Source: Somerset Local Transport Plan 2 (Somerset County Council, 2006))

5 Data Sources and Gaps

5.1 Data Sources

- Somerset Economic Digest (Somerset County Council, March 2009);
- Somerset County Council (2008) Local Transport Plan 2 Progress Report;
- Somerset Economic Strategy (Somerset County Council, no date given);
- Taunton Transport Strategy Review 2 Final Report (Atkins, 2008);
- The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009);
- Somerset LTP2 Annual Progress Report 2 (Somerset County Council, 2008);
- Somerset Visitor Survey (2003) Final Report (South West Tourism Research Department, March 2004);
- Mode Share of Journeys To School Census Data (DfT, January 2008);
- Network Management Plan (Somerset County Council, 2009); and
- National Highways and Transport Public Satisfaction Survey www.nhtnetwork.org.

5.2 Data Gaps

The following data gaps have been identified:

- Information on sustainable transport access to tourism destinations; and
- Uncertainties in the long term trends on area wide traffic mileage due to changes in fuel prices and economic uncertainties.

6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown in Table TP3.2. These issues will be used to guide the selection of the SA Objectives that the plan will be assessed against.

Table TP3.2: Issues and Future Baseline	
Issue	Likely Future Baseline
Up to 31% of people who live in Somerset work outside the county boundary	Due to the number of factors involved this is difficult to predict. The future growth strategy is to focus more development in SSCTs so this may help retain more commuters in the county depending on the success of Somerset's SSCTs in relation to those in other areas
Most people still travel to work by car and a large proportion of pupils are still driven to school	In the absence of measures promoted through the Somerset County Council Transport Policies the position is likely to stay the same or get worse
There is congestion in key points in Taunton, Bridgwater and Yeovil but congestion is better	Journey times and congestion will increase in the future baseline especially in the main towns as

Table TP3.2: Issues and Future Baseline

Issue	Likely Future Baseline
than target due to the economic slowdown	growth continues
Unclear data on the growth in overall traffic mileage due to changes in fuel prices and economic performance	This is difficult to predict because of the uncertainty of the future economic situation
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	It is unlikely that the decline is a long term trend. It is difficult to predict how decisions in the future by other authorities will affect Somerset's road systems

7 Suggested SEA Objectives

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

Economy	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Help to manage and maintain the existing transport system efficiently?	<ul style="list-style-type: none"> • Help to manage routes effectively in order to maintain journey times?
Invest in transport improvements that help the economy of Somerset?	<ul style="list-style-type: none"> • Include schemes that decrease journey times, congestion, improve journey time reliability and help to meet congestion targets in the Somerset County Council Transport Policies?
Provide more sustainable transport access to rural areas, the countryside and visitor attractions?	<ul style="list-style-type: none"> • 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?
Reduce the impact of road freight on communities?	<ul style="list-style-type: none"> • Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts on communities and the environment?

All of the indicators will contribute to LAA indicator NI 151 Overall Employment Rate.



Somerset County Council

Somerset County Council
Transport Policies Strategic
Environmental Assessment
Environmental Report

Appendix 1 (Topic Paper 4
Accessibility)

Prepared for:

**Somerset County Council
Taunton**

Prepared by:



**ENVIRON
Exeter, UK**

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Table of Contents

1	Introduction	1
2	Policy Context	1
2.1	National Transport Goals	2
2.2	Regional Spatial Strategy (RSS)	2
2.3	Sustainable Community Strategy and Local Area Agreement	2
3	The Influence of the Somerset County Council Transport Policies	5
4	Baseline Data	5
4.1	Accessibility Planning	5
4.2	Improving Transport for Everyone	8
4.3	Bus Services	11
4.4	Demand Responsive Services	12
4.5	Rail Services	12
5	Data Sources and Gaps	13
5.1	Data Sources	13
5.2	Data Gaps	13
6	Sustainability Issues	14
7	Suggested SEA Objectives	14

1 Introduction

This is Topic Paper 1 of the SEA Environmental Report of the Somerset County Council Transport Policies (the equivalent of the Local Transport Plan). The topic paper addresses the potential issues of relevance to the Somerset County Council Transport Policies which are related to the RSS high level sustainability objective of¹:

Provide access to meet people's needs with least damage to communities and the environment

There are five other Topic Papers that address:

- Improving health (Topic Paper 1);
- Supporting communities that meet people's needs (Topic Paper 2);
- Developing the economy in ways that meet people's needs (Topic Paper 3);
- Maintain and improve environmental quality and assets (Topic Paper 5); and
- Minimising consumption of natural resources (Topic Paper 6);

This paper sets out:

- The policy context that the Somerset County Council Transport Policies will need to address;
- The influence that the Somerset County Council Transport Policies 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 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.

¹ 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.

A summary has been included below of the key documents that the Somerset County Council Transport Policies 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 Somerset County Council Transport Policies.

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 Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation* (July 2008). The RSS includes a number of relevant policies including:

Policy SI2: Taking Account of the Needs of All Groups in Society: The needs of all groups in society will be taken account of when planning the development of communities in the South West to ensure that all members of society are able to benefit from growing prosperity and improving quality of life in the region.

It is also an objective of the RSS to address social exclusion by improving accessibility to jobs and services.

2.3 Sustainable Community Strategy and Local Area Agreement

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

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

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

- Aim 4: Enjoying and Achieving: The vision for 2026 - Somerset is a great place to live and to raise children. Everyone feels able to develop and improve their skills and life opportunities, free from poverty and discrimination.
- Relevant challenges highlighted under Aim 4 are:
 - Raise achievement and fulfil aspirations;
 - Promote lifelong learning and cultural opportunities; and
 - Promote independent living.

Relevant targets are:

- Increase the number of visits to public libraries, museums and galleries and people participating in the arts;
- Increase the number of people over 65 who say that they receive the information, assistance and support needed to exercise choice and control to live independently; and
- Increase the percentage of vulnerable people who are supported to maintain independent living.

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 75 Access to services and facilities by public transport, cycling and walking.

Table TP4.1: Accessibility Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
International documents	
No relevant documents (see also policy reviews in the health and community topic papers)	NA
National documents	
Making the Case: Improving Health through Transport (Health Development Agency, 2005)	Making the Case: Improving Health through Transport: Transport can promote psychological wellbeing through access to education, employment and social networks, as well as physical wellbeing through access to good quality food
Regional documents	
No relevant documents (see also policy reviews in the health and community topic paper and the RSS review above)	NA
Local documents	
No relevant documents (see also review of Sustainable Community Strategy above)	NA

3 The Influence of the Somerset County Council Transport Policies

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

- Improve sustainable access to basic services such as education, healthcare, employment, leisure and shopping; and
- Improve access for certain groups in society (DfT guidance recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible).

4 Baseline Data

4.1 Accessibility Planning

The Second Local Transport Plan included a detailed accessibility strategy which gathered together a large amount of data on accessibility. This data is summarised below.

- *Accessibility and employment:* Around 50% of all job vacancies in Somerset in 2003 were classified as 'hard to fill', compared to a national average of 40%. Amongst those businesses with 'hard to fill' vacancies, 17% stated that remote location and poor public transport were reasons for difficulties;
- *Accessibility and education:* The availability of transport can impact upon student choice (sixth form and degree students) and ability of school students to participate in after school activities;
- *Accessibility and health:* 30% of trips to Musgrove hospital are undertaken by taxi due to the unavailability of the volunteer transport service (which has now been completely withdrawn (see below);
- *Accessibility between areas of the county:*
 - In general accessibility between the main towns in the county is good: in most cases, direct trips can be made, either by bus, rail or both, with reasonably frequent services;
 - Access from the rural areas to the nearest market town is direct, through the provision of either conventional bus services or demand responsive transport, although the service frequency is relatively low, and a greater degree of advance planning is required; and
 - Accessibility from the rural areas, beyond the nearest market town to other parts of the county is, however, less direct, with at least one bus service change required. In order to travel between a rural origin and a rural destination, in many cases two bus service changes will be required. This is likely to be unattractive, due to

inconvenience and the length of the journey. In this case, it is important to recognise that there will continue to be a role for travel by private car.

- *Accessibility by rail:* The County has no branch lines and in most towns the stations are not located close to the town centres or areas of main employment. Rail therefore makes up less than 0.5% of journeys to work in the County;
- *Accessibility by bus:* Of the 230 routes in the county 18 are operated commercially but these 18 carry over a third of all passenger journeys. Bus services in rural communities generally do not offer direct links to key destinations; and
- *Community Based/Voluntary Transport:* Community/Voluntary transport services in Somerset currently operate within each of the five district council areas and include services such as district wide demand responsive minibus services, fixed route minibus services voluntary car schemes, village social car schemes, moped loan schemes, taxi-bus schemes and SLINKY bus services.

The LTP2 set out a programme of local area studies to look in more detail at a number of areas that had been identified as a priority for improving access to key services in Somerset. The areas are split into a mix of geographical and theme areas. The latest programme is shown in Table TP4.2.

Table TP4.2: Local Accessibility Studies				
Local Area Studies	Estimated Timescale			
	07/08	08/09	09/10	10/11
Access to key services in Bridgwater and rural surrounds	X			
Access to Hospitals for residents of Burnham on Sea	X	X		
Access to Hospitals for residents of rural West Somerset	X	X		
Access to Hospitals for residents in NE Sedgemoor and West Mendip	X	X		
Access to Hospitals in Mendip market towns and their rural surrounds	X	X		
Access to Post 16 education and employment in rural West Somerset		X		
Access to Post 16 education and adult learning in South Somerset		X		
Access to employment in rural hinterlands of Yeovil		X		
A three market town study: access to services in rural Chard, Ilminster & Crewkerne		X	X	
Access to adult learning in central Mendip			X	
Access to education and skills in Frome and its rural surrounds			X	
Improving access to work and colleges for residents of rural Taunton				X
Improving access to Hospitals for residents of rural Taunton				X

Table TP4.2: Local Accessibility Studies

Local Area Studies	Estimated Timescale			
	07/08	08/09	09/10	10/11
Development and Implementation of an Information Action Plan	X	X	X	X
Mainstreaming Accessibility	X	X	X	X

The first three of the studies have now been completed and a further two are almost complete. A summary of the results (taken from the latest Annual Progress Report) is described below.

The first five local area studies identified that access to hospitals and healthcare was an issue for many residents of Somerset. These studies identified a number of issues common to them all:

- The eligibility criteria for non-emergency transport is unclear to both health professionals and patients that use the services;
- There is lack of transport information provided at hospitals;
- Transport information is generally not provided when appointments are booked and there is no consideration of a patient's transport restrictions when appointments are booked (i.e. buses available at that time);
- Patients are not aware of the full range of transport available to them (such as community transport, demand responsive transport etc); and
- There is no clear process in place for early stage healthcare service planning (i.e. early dialogue between the planning authority and healthcare provider on potential new builds or service changes).

In addition the South Western Ambulance Service Trust in March 2009 withdrew its Voluntary Ambulance Car Service, a significant section of Somerset's non-emergency transport provision.

At the March 2008 Somerset Health Overview and Scrutiny Committee meeting it was agreed that Somerset County Council and Somerset Primary Care Trust would work in partnership to develop a joint strategy that addresses the health transport issues identified above. The strategy will focus initially on ensuring a seamless transition of the Voluntary Ambulance Car Service and development of clear early planning guidance, joint promotion of transport services and joint efficiency savings. As part of these improvements it is planned to establish a 'One Stop Shop' where Somerset's residents can dial a single number (call centre) and obtain information or book transport for any of their travel needs including non-emergency health transport or social transport.

The joint working group aims to obtain final agreement of the strategy by January 2009. However, the non-emergency transport remit was dropped by the NHS and, since April 2009, has been run by Somerset County Council's Somerset Direct.

The National Highways and Transport Public Satisfaction Survey (www.nhtnetwork.org) has also published some figures on people's satisfaction regarding accessibility and these are shown in Table TP4.3.

Table TP4.3: People's Satisfaction with Accessibility to Different Services	
Indicator	% who are satisfied
ABI 01 Where you work	78.92
ABI 02 Post Office/banks	77.23
ABI 03 Local shops/supermarkets	81.90
ABI 04 Hospital	64.33
ABI 05 Doctors and health facilities	81.01
ABI 06 School/college	78.99
ABI 07 Leisure Facilities	75.53
ABI 08 To visit friends/family	75.03
KBI 03 Access to Key Services	76.62
KBI 04 Access to Key Services(Disabilities)	72.81
KBI 05 Access to Key Services (No Car)	67.72

Some of the figures in the survey show fairly high satisfaction levels. However, the access to key services for people without a car is much lower at 67.72% (and this compares to an average rating of 73.16% for all highway authorities).

4.2 Improving Transport for Everyone

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. The DfT has carried out some research entitled "Social Inclusion – Transport Aspects" which analyses how transport policies can affect different groups. A précis of this research is described below in sections 4.2.1 to 4.2.4. The full research reports can be found at <http://www.dft.gov.uk/pgr/inclusion/>

The main aim of the research project was to identify ways of better integration of social inclusion in the current transport modelling and appraisal techniques. The work involved the review of conceptual issues surrounding the links between social inclusion and transport and existing transport modelling techniques. Additional reports to the study present a review of travel patterns and accessibility of different age and social groups. Some of the findings are discussed below:

4.2.1 Travel by Children and Young People

The key findings of the research are:

- Until the age of about 10, there is little difference between travel by boys and girls. Both make similar numbers of trips, and travel mainly as car passengers. Most of the rest of their travel is on foot;

- At secondary school age some changes become apparent. Car travel decreases and bus use begins to increase. Boys are more likely to make trips by bicycle. Girls also start to make more trips overall than boys;
- Travel by other modes, including rail and taxi, become more significant from the age of about 16, and car travel increases again as some young people start to drive;
- In term of purpose of travel, between the ages of 5-15 the main purpose is education which accounts for 35-40% of all trips. From the age 15 onwards some travel is done for work;
- 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;
- Young people have indicated that they have a positive view about cycling although it is associated with a number of problems such as lack of cycle lanes, fear of traffic, fear of theft and the "hassle" factor, which refers to taking the bicycle to school and the difficulty in carrying schoolbooks; and
- Walking was perceived by young people as more efficient than the bus for short journeys, although parents have expressed concerns over safety.

Somerset County Council has identified that young people in Somerset encounter problems in accessing the services they need. The Accessibility Team is working with the Children and Young People's Directorate to jointly deliver one of its Activity Plan themes "Ways of improving children and young people's access to service in rural areas". Progress towards delivery has been through a number of activities such as officer inclusion within Somerset's Post-14 Transport Group and Somerset's Building Schools for the Future Team. A number of schemes have also been delivered including Repair and Ride at Colleges and Sixth Forms, and the development of transport web pages specifically designed for young people. Future activities include continued close working with the Building Schools for the Future Team and Post-14 Transport Group in addition to further scheme delivery, such as the development of a trial bicycle loan scheme for young people in Bridgwater (an area where the first local area study identified cycling as key to addressing poor access to services).

4.2.2 Travel by Women

- Available information indicates a fairly even split between men and women in respect of total number of journeys made;
- When the travel indicator is mileage rather than trips, however, a very different pattern emerges. In 1995/97, adult men (aged 16+) travelled on average nine thousand miles per year, compared with an average of fewer than six thousand miles travelled by women;
- Over all ages and all modes, the average trip length for men was 7.4 miles and 5.3 miles for women (i.e. 40 per cent less than men). This gender gap in mileage has been closing over recent years;
- 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;

- 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); and
- 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.

The DfT has a gender audit checklist that can be used by policy makers to assess the effect of their policies on women. This can be found at

<http://www.dft.gov.uk/pgr/inclusion/women/public-transport-and-women/checklist.pdf>

4.2.3 Travel by Older People

As indicated in the health topic paper, Somerset has an older average population than the country and the region as a whole so the findings of the research are likely to be important. The key findings of the research are:

- Four-fifths of the respondents would prefer not to travel long distances, at night, in bad weather and in town centres;
- Older people are constrained not only by cost but also by difficulties in walking, using public transport and lack of means to access certain destinations;
- The survey suggest that concessionary fare awareness is poor amongst drivers, people from ethnic minorities and people aged 75 and over; and
- Poor maintained pavements were also raised as a key issue amongst older people. There were issues surrounding provisions of real time transport information through the internet and WAP telephones as not all older people can necessarily afford or understand new technology.

4.2.4 Travel by Minority, Ethnic and Faith Communities

The key findings of the research are:

- At present, there is inadequate understanding by service providers of the transport needs of minority ethnic and faith communities. A consequence of this is that initiatives to promote services are frequently ineffective in reaching some communities and do not produce the expected results;
- The views of minority ethnic and faith communities are often left out of consultation and customer care surveys, either because they are not selected to participate in the first place or because sample numbers are too small for analysis. The ensuing lack of information can result in missed commercial opportunities;
- Racist behaviour by both staff and other passengers (including in waiting areas) is a problem for passengers in minority ethnic and faith communities. For this reason, it is doubly important that complaints procedures are well developed; and
- 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

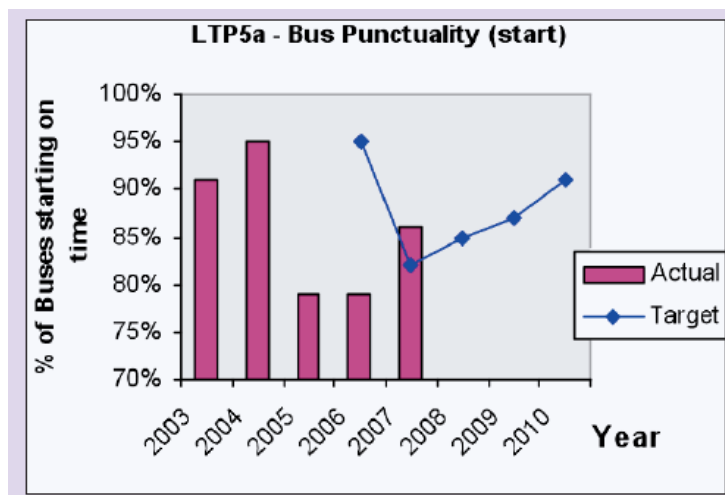
travel between locations outside the centre have to change buses or trains more frequently. This makes journeys longer, more complicated and expensive. Given the location of many ethnic community shopping and other facilities, this can have an unintentional discriminatory effect.

4.3 Bus Services

In terms of bus punctuality there is a mixed picture but there has been a substantial improvement in the last year of monitoring. The APR reports that joint working with bus operators in Taunton and Yeovil has contributed to the improvements. This is shown in Figure TP4.1.

Bus stop information has been identified as problematic; new timetable software has been obtained and this is being rolled out on a route by route basis since late summer 2008.

Figure TP4.1: Bus Punctuality



The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008) also discusses bus use and makes the following observations:

- The predominant movement of bus passengers is from Wellington to Taunton in the AM peak with the reverse in the PM peak;
- Very few bus passengers travel from Taunton to Bridgwater in either peak period with an average of around 20 passengers per bus travelling in the opposite direction in the AM peak; and
- Use of the rail network has increased since the completion of TTSR1, with both Bridgwater station and Taunton station showing significant increases in patronage.

The Second Yeovil Transport Strategy Review, Draft Baseline Review of Transport Conditions (Somerset County Council, 2009) makes the following observations:

- Local bus services operating in and around Yeovil are not well used and bus travel only accounts for a small % of travel (1% of travel to work, for example);

- Yeovil has a number of routes within the town itself and 5 services that connect Yeovil to other areas in Somerset and Dorset;
- Yeovil is served by two railway stations but there are difficulties accessing and transferring between stations and relatively limited services.

4.4 Demand Responsive Services

The Slinky Bus is an initiative funded through Somerset County Council that aims to provide transport for residents living in rural areas that do not have access to any other form of transport. It is a demand responsive transport service where residents can book the service at least 24 hours in advance. The vehicles are fully accessible by wheel chairs, buggies and shopping trolleys. The service is open to all people who do not have access to transport. County Ticket (young people) and Concessionary Fare users can use the services free of charge. The services are specifically designed to facilitate access to local health appointments, shopping trips, journey to and from work, social events and evening classes and meetings.

At the beginning of the LTP2 period, three Slinky bus services covered Taunton and Wellington, Wincanton area and Cheddar area. The Accessibility Strategy helped to identify priority areas of poor access and influenced the roll out programme: to provide additional services in Sedgemoor, South Somerset and Mendip. The services in South Somerset, covering Chard and Crewkerne area and the services in Mendip covering the Street area have largely been implemented. It is expected that the services in Sedgemoor will be completed in 2009.

A similar scheme also exist that served 16-25 years old that do not have transport to education, training and employment. This scheme is called the mopped loan scheme and has received funding for the 2008/2009 academic year.

4.5 Rail Services

Somerset has the following rail services.

London Waterloo - Salisbury - Exeter line

South West Trains run services between Exeter, Salisbury and London Waterloo and stop at Crewkerne, Yeovil Junction and Templecombe in Somerset. Axminster in Devon is also used as a local station by some Somerset residents, particularly for journeys towards Exeter. It provides a major alternative to the A303 and for a substantial part of the County is the main rail route to London.

Exeter - Taunton - Bristol Line

The Bristol to Exeter main line is recognised by the EU as part of the Trans European Network (TENs). It is a double track railway and runs from Bristol to Exeter parallel with the M5 motorway. In addition, a double track main line branches off eastward at Cogload Junction, north of Taunton, running east to Westbury and London Paddington. There is a single-track branch north of Highbridge, which forms a loop serving Weston Super Mare. There is also a private single-track branch line to Minehead at Norton Fitzwarren, south of

Taunton on which the West Somerset Railway runs. In Somerset, there are stations at Taunton, Bridgwater and Highbridge.

Taunton - London Paddington Line

Branching off the Bristol to Exeter mainline just to the east of Taunton at Cogload Junction is the double track main line to Westbury and London Paddington. On this line, there are stations at Taunton, Castle Cary, Bruton, and Frome (located to the west of the main line on a branch line) in Somerset and Westbury (also bypassed by the main line) in Wiltshire.

A Somerset Passenger Rail Strategy was included as part of the Second Local Transport Plan. The key priorities for rail in Somerset are to improve accessibility to and facilities at stations and to increase the level of rail patronage within the County. Priorities for individual lines are:

London Waterloo - Salisbury - Exeter line

Work with the rail industry to achieve hourly services on the route through targeted infrastructure improvements has now been achieved.

Exeter - Taunton - Bristol Line

Maintain December 2004 service levels as a minimum and achieve regular service time frequency.

Taunton - London Paddington Line

Maintain December 2004 service levels at Taunton to Paddington and the south west, strengthened to hourly services, with improved service frequencies at Castle Cary

5 Data Sources and Gaps

5.1 Data Sources

- Social Inclusion: Transport aspects (DfT, 2006) <http://www.dft.gov.uk/pgr/inclusion/>;
- National Highways and Transport Public Satisfaction Survey (www.nhtnetwork.org);
- Somerset LTP2: Second Annual Progress Report (Somerset County Council, 2008); and
- The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008).

5.2 Data Gaps

- The particular issues that different equality groups in Somerset face. The only available data is at a national level; and
- The results of most of the local access studies are not yet available. All the recent accessibility data relates to health so the issues in relation to other services are less clear.

6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown in Table TP4.4. These issues will be used to guide the selection of the SA Objectives that the plan will be assessed against.

Table TP4.4: Issues and Future Baseline	
Issue	Likely Future Baseline
Access to services (especially healthcare) 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
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 scarce in Somerset and information is needed to set a baseline before action can be taken
Bus punctuality is improving but there are problems with bus stop information	According to the Taunton Transport Strategy Review accessibility to public transport is likely to decrease as congestion on the network increases and bus time reliability falls
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	It is expected that rail use will continue at the same level or even increase slightly in light of some of the recent infrastructure upgrades

7 Suggested SEA Objectives

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

Accessibility	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Improve sustainable access to basic services for all groups in society	<ul style="list-style-type: none"> • Improve provision of public and community transport that makes key services² 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

² Key services include schools and learning, open space and recreation, jobs, leisure facilities, areas of cultural heritage and health facilities

	citizens. This includes changes to physical infrastructure and services.
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Somerset County Council

Somerset County Council
Transport Policies Strategic
Environmental Assessment
Environmental Report

Appendix 1 (Topic Paper 5
Environmental Assets)

Prepared for:

**Somerset County Council
Taunton**

Prepared by:



**ENVIRON
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Table of Contents

1	Introduction	1
2	Policy Context	1
2.1	National Transport Goals	2
2.2	Regional Spatial Strategy (RSS)	2
2.3	Sustainable Community Strategy and Local Area Agreement	3
3	The Influence of the Somerset County Council Transport Policies	8
4	Baseline Data	8
4.1	Biodiversity Data	8
4.2	Landscape Data	29
4.3	Heritage Data	34
5	Data Sources and Gaps	35
5.1	Data Sources	35
5.2	Data Gaps	36
6	Sustainability Issues	36
7	Suggested SEA Objectives	37

1 Introduction

This is Topic Paper 5 of the SEA Environmental Report of the Somerset County Council Transport Policies (the equivalent of the Local Transport Plan). . The topic paper addresses the potential issues of relevance to the Somerset County Council Transport Policies which are related to the RSS high level sustainability objective of¹:

Maintain and improve environmental quality and assets

There are five other Topic Papers that address:

- Improving health (Topic Paper 1);
- Supporting communities that meet people's needs (Topic Paper 2);
- Developing the economy in ways that meet people's needs (Topic Paper 3);
- Provide access to meet people's needs with least damage to communities and the environment (Topic Paper 4);
- Minimising consumption of natural resources (Topic Paper 6);

This paper sets out:

- The policy context that the Somerset County Council Transport Policies will need to address;
- The influence that the Somerset County Council Transport Policies 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 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.

¹ 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.

A summary has been included below of the key documents that the Somerset County Council Transport Policies 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 Somerset County Council Transport Policies.

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 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 Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation* (July 2008). The RSS includes a number of relevant policies including (the policies have been summarised):

Policy SD3 The Environment and Natural Resources: The region's environment and natural resources will be protected and enhanced by ensuring that development respects landscape and ecological thresholds, reducing the environmental impact of the economy, transport and development, reduce pollution and contamination, maintain tranquillity and contribute to regional biodiversity targets through the restoration, creation, improvement and management of habitats.

Policy ENV1 Protecting and Enhancing the Region's Natural and Historic

Environment: The quality, character, diversity and local distinctiveness of the natural and historic environment in the South West will be protected and enhanced, and developments which support their positive management will be encouraged. Development should seek to

avoid loss of or damage to assets, then mitigate any unavoidable damage, and compensate for loss or damage through offsetting actions.

Policy ENV2 Landscape Character Areas: The distinctive qualities and features of the South West's landscape character areas will be sustained and enhanced by assessments of landscape character in order to identify priority areas for the maintenance, enhancement and/or restoration of that character and provide an appropriate policy framework in LDDs for each area.

Policy ENV3: Protected Landscapes: In Dartmoor and Exmoor National Parks and the 14 AONB's the conservation and enhancement of their natural beauty, wildlife and cultural heritage will be given priority over other considerations in the determination of development proposals. Development will only be provided for where it would conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park or AONB, promote the understanding and enjoyment of the special qualities of the National Park or foster the social or economic well-being of the communities provided that such development is compatible with the pursuit of National Park or Area of Outstanding Natural Beauty purposes.

Policy ENV4: Nature Conservation: The distinctive habitats and species of the South West will be maintained and enhanced in line with national targets and the South West Regional Biodiversity Action Plan. Local Authorities should use the Nature Map to help map local opportunities for biodiversity enhancement in Local Development Documents, taking into account the local distribution of habitats and species, and protecting these sites and features from harmful development.

Policy ENV5 Historic Environment: The historic environment of the South West will be preserved and enhanced. Local Authorities and other partners will identify and assess the significance of the historic environment and its vulnerability to change, using characterisation to understand its contribution to the regional and local environment and to identify options for its sensitive management.

Policy GI1 Green Infrastructure: Development of networks of Green Infrastructure (GI) will be required to enhance quality of life in the region and support the successful accommodation of change. GI networks will comprise multifunctional, accessible, connected assets, planned around existing environmental characteristics. Plans, strategies, proposals and schemes should aim to deliver wider spatial outcomes that incorporate environmental and socio-economic benefits by;

- Conserving and managing existing GI;
- Creating new GI; and
- Enhancing its functionality, quality and connectivity.

2.3 Sustainable Community Strategy and Local Area Agreement

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

- Making a positive contribution;
- Living sustainably;

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

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

- Aim 2: Living Sustainably: The vision for 2026 - everyone is aware of the impact of climate change on the county and of the importance of reducing and managing its effects.
- Relevant challenges highlighted under Aim 2 are:
 - Increase people's quality of life through the use of Somerset's environment, nature and heritage.

Relevant targets are:

- Improve the health of the natural environment in Somerset.

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:

- LP I6 Health of the Natural Environment (basket of indicators as follows).
 - All 7 authorities to have access to appropriate ecological expertise and a Service Level Agreement with an appropriate ecological data provider;
 - Local Biodiversity Action Plans and AONB plans included within Sustainable Community Strategy of all 6 authorities and Exmoor National Park Authority;
 - All 7 authorities' climate change adaptation plans include action on wildlife adaptation;
 - Declare two additional Local Nature Reserves / National Nature Reserves per District;
 - Produce a Natural Environment Strategy for Somerset, drawing together a number of individual strategies on Biodiversity, Land , Coastal, Landscape, Woodland, Water & Catchment management; and
 - Establish a network of community woodlands near Somerset's Towns/large villages and promote the health benefits of green space and the play agenda.

Table TP5.1: Environmental Assets Policy Contexts	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
International documents	
<p>Conservation of Natural Habitats and Wild Fauna & 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>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>
National documents	
<p>The Conservation (Natural Habitats &c.) Regulations 1994 (amended 2009)</p> <p>Natural Environment and Rural Communities Act (Defra, 2006)</p> <p>Wildlife and Countryside Act 1981 (as amended)</p> <p>UK Biodiversity Action Plan (1994)</p> <p>Countryside and Rights of Way Act 2000 (CRoW)</p> <p>Working within the Grain of Nature (Defra, 2002)</p> <p>Planning Policy Statement 9 – Biodiversity and Geological Conservation (2005)</p> <p>Natural England, LTP and Rights of Way Improvement Plan Integration. Good Practice Note (2009)</p>	<p>Conservation (Natural Habitats &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>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>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>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>LTP and Rights of Way Improvement Plan Integration: Local authorities should be clear about how</p>

Table TP5.1: Environmental Assets Policy Contexts	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
<p>Protected Landscapes: Draft Policy for Consultation (Natural England, 2009)</p> <p>PPG15: Planning and the Historic Environment (1994) and PPG16: Archaeology and Planning (1990)</p> <p>Protecting our historic environment: making the system work better (Department for Culture, Media and Sport, 2003)</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>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>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 being accessible to everybody and protected and sustained for the benefit of our own and future generations.</p>
Regional documents	
<p>South West Biodiversity Implementation Plan (2004)</p> <p>A Strategy for the Historic Environment in the South West (English Heritage, 2004)</p> <p>A Better Place to be: Culture and South West England (September, 2008)</p>	<p>South West Biodiversity Implementation Plan: This document has the objectives of contribute to international commitments, in particular to halt biodiversity loss by 2010; and continued and sustained improvement in the status of terrestrial and marine species and habitats listed in the Biodiversity Action Plan.</p> <p>A Strategy for the Historic Environment in the South West: This document has the objectives of continue to improve knowledge and understanding of the South West's historic environment and reflect this in informed and positive conservation and enhancement of the historic environment and put conservation at the heart of urban renewal and regeneration strategies, initiatives and proposals.</p>
Local documents	
<p>Somerset Biodiversity Strategy: 'Wild Somerset' 2008-2018 (Somerset County Council, 2008).</p>	<p>Somerset Biodiversity Strategy: Ensuring that species legislation is effectively enforced and promote habitat creation and enhancement opportunities within development and ensure the fullest possible</p>

Table TP5.1: Environmental Assets Policy Contexts

Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
<p>Exmoor National Park Management Plan (2007-2012) (Exmoor National Park Authority, 2007).</p> <p>Quantock Hills AONB Management Plan (2009-2014) (Quantock Hills AONB Service, 2009).</p> <p>Mendip Hills AONB Management Plan (2004-2009) (Quantock Hills AONB Service, 2009)</p> <p>Blackdown Hills AONB Management Plan (2009-2014) (Blackdown Hills AONB Service, 2009)</p> <p>Cranborne Chase and West Wiltshire Downs AONB Management Plan (2009-2014) (Cranborne Chase and West Wiltshire Downs AONB Service, 2009)</p> <p>Somerset's Culture – Something to declare - A cultural strategy for the county of Somerset 2002 (Somerset County Council, 2002)</p>	<p>protection of semi natural habitats.</p> <p>Exmoor National Park Management Plan: Landscape objectives include conserving and enhance the distinctive characteristics, qualities and condition of Exmoor's landscapes and ensure that Exmoor remains a landscape relatively free from intrusive developments and activities.</p> <p>Quantock Hills AONB Management Plan: In 20 years time the AONB will experience a reduced level of vehicular traffic in the network of Quantock lanes and roads and road use adapted to the rural size and nature of local routes, maintaining the distinctive character of country lanes and improving safety in respect of livestock, wildlife, walkers, riders and drivers.</p> <p>Mendip Hills AONB Management Plan: The volume and speed of traffic using routes through the Mendip Hills AONB is a concern. The Strategic Traffic Action Group is currently looking at the Local Freight Strategies that affect the area. The long-term effects on the AONB and on local resident's health should be addressed in decisions on HGV routing.</p> <p>Blackdown Hills AONB Management Plan: This report is not available at present but will be reviewed when available.</p> <p>Cranborne Chase and West Wiltshire Downs AONB Management Plan: Highway improvements, excessive signage, lighting and other road 'furniture' are eroding the rural character of the AONB.</p> <p>Somerset's Culture – Something to declare: Some of the actions listed are marketing Somerset as a sustainable tourism destination, developing the health benefits of culture and an active sport programme.</p>

3 The Influence of the Somerset County Council Transport Policies

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

- Through introducing new traffic / routes into areas that are environmentally sensitive – i.e. through new transport routes directly causing air and 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
- Through changing transport conditions on existing routes that can affect the environment. For example through increasing traffic (and therefore air pollution near to a site that is sensitive to poor air pollution – i.e. an area of heathland).

Please note that climate change issues and issues related to some other natural resources are addressed in Topic Paper 6.

4 Baseline Data

4.1 Biodiversity Data

4.1.1 Regional Biodiversity and Natural Areas

The South West has a rich and diverse range of wildlife, and retains a significant proportion of the UK's overall resource of important wildlife sites, habitats and species. Nearly a tenth of the Region's land area is designated as nationally and internationally important wildlife sites, many of which are unique in Europe. However, there have been significant declines in certain habitats and species in past years and much of the South West wildlife is still under threat. Biodiversity in the South West is particularly threatened by land use changes (development, agriculture and water management), climate change and environmental pollution (www.swenvo.org.uk).

The South West Biodiversity Implementation Plan (BIP), launched in July 2004, sets out a framework of policy, priorities and actions to assist in a more integrated approach to delivering biodiversity aims. The aim of the BIP is to:

- Enable UK biodiversity plans to be implemented at the regional and local level;
- Enable organisations that function at a regional (or similar administrative boundaries) to recognise those conservation priorities relevant to their boundaries;
- Inform regional planning of the main biodiversity issues within the South West; and
- Ensure the best possible information base on which decisions can be made.

The South West BIP identifies key programmes of work under five key sectors:

- Farming and Food;
- Water and Wetlands;
- Woodlands and Forestry;
- Towns, Cities and Development; and
- Coastal and Marine Environment.

There are also generic priorities that are relevant to all of the sectors, these are:

- Maintain and enhance biodiversity by sensitively managing existing habitats, expanding and re-establishing links between fragmented sites and where appropriate, managing at a larger, functional scale (landscape, ecosystem or catchment);
- Develop integrated sustainable land management practices that safeguard and enhance the region's biodiversity whilst also bringing benefits to society, the economy and environment;
- Increase awareness and understanding of the importance of biodiversity to the region's health, quality of life and economic productivity and develop wider support and active engagement; and
- Understand and manage the dynamic processes of change (e.g. climate change) and develop long-term sustainable approaches within the region that focus on the quality, extent and diversity of habitats.

4.1.2 South West Nature Map

The South West Nature Map illustrates the larger areas of the South West that have a high value for biodiversity and potential habitat restoration. Figure TP5.1 shows the Somerset area of the South West Nature Map. The Regional Spatial Strategy for the South West states that 'Local Authorities should use the Nature Map and work with interested local stakeholders including local biodiversity partnerships and local record centres to map local opportunities for biodiversity enhancement in LDDs.

Biodiversity South West also published habitat targets for the South West in March 2006. These can be found here http://www.biodiversitysouthwest.org.uk/hom_abo_hab.html. These targets will be monitored as part of the Regional Spatial Strategy.

These targets were broken down by county and the targets for Somerset can be found at the following weblink and are reproduced in Table TP5.2:

<http://www.biodiversitysouthwest.org.uk/docs/SW%20BD%20Targets%20County%20breakdown%20Mar06%20-%20Somerset.pdf>

Table TP5.2: Somerset Priority BAP Targets				
Habitat	Maintenance target	Restoration/expansion target		
		2010	2020	2030
Water and wetlands				
Coastal and floodplain grazing marsh	28207	232	695	1158
Reedbeds	483	#	#	#
Fens	7	#	#	#
Lowland raised bog	Unable	Unable	Unable	Unable
Chalk rivers	Unable	Unable	Unable	Unable
Mesotrophic lakes and eutrophic standing waters	Unable	Unable	Unable	Unable
Marine and coastal				
Coastal saltmarsh	331	#	#	#
Mudflats	4230	#	#	#
Coastal vegetated shingle	0	#	#	#
Sand dunes	172	#	#	#
Sabellaria reefs	1	Unable	Unable	Unable
Maritime cliff and slope	807	#	#	#
Saline lagoons	1	#	#	#
Seagrass beds	0	Unable	Unable	Unable
Maerl beds	Unable	Unable	Unable	Unable
Sublittoral sand and gravel	Unable	Unable	Unable	Unable
Farmland				
Hedgerows	Unable	Unable	Unable	Unable
Lowland meadows	326	#	1189	1981
Lowland heathland	150	#	#	#
Lowland dry acid grassland	451	#	0	0
Lowland calcareous grassland	1189	230	690	1150
Purple moor grass and rush pasture	346	0	0	0
Cereal field margins	#	#	Unable	Unable
Uplands				
Blanket bog (Exmoor)	575	52	172	440
Heathland in upland areas (including part of Devon)	3303	1598	4793	7988

Unable = Unable to set quantitative targets with currently available data

= target set for region only. Not available by county

(Source: Biodiversity South West)

4.1.3 Internationally Designated Sites

Under the Conservation (Natural Habitats &c.) Regulations 1994 (as amended 2007), Somerset County Council, as the 'competent authority' under the Regulations, is required to assess its Somerset County Council Transport Policies through the Habitat Regulations Assessment (HRA) process as policies and transport projects in the plan can potentially affect Natura 2000 sites. Somerset County Council will be undertaking a HRA screening assessment and this process. A separate HRA screening report will be produced shortly and 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).
- 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.

Table TP5.3 discusses the Natura 2000 sites present within Somerset. These sites are also shown in Figures TP5.2 and TP5.3.

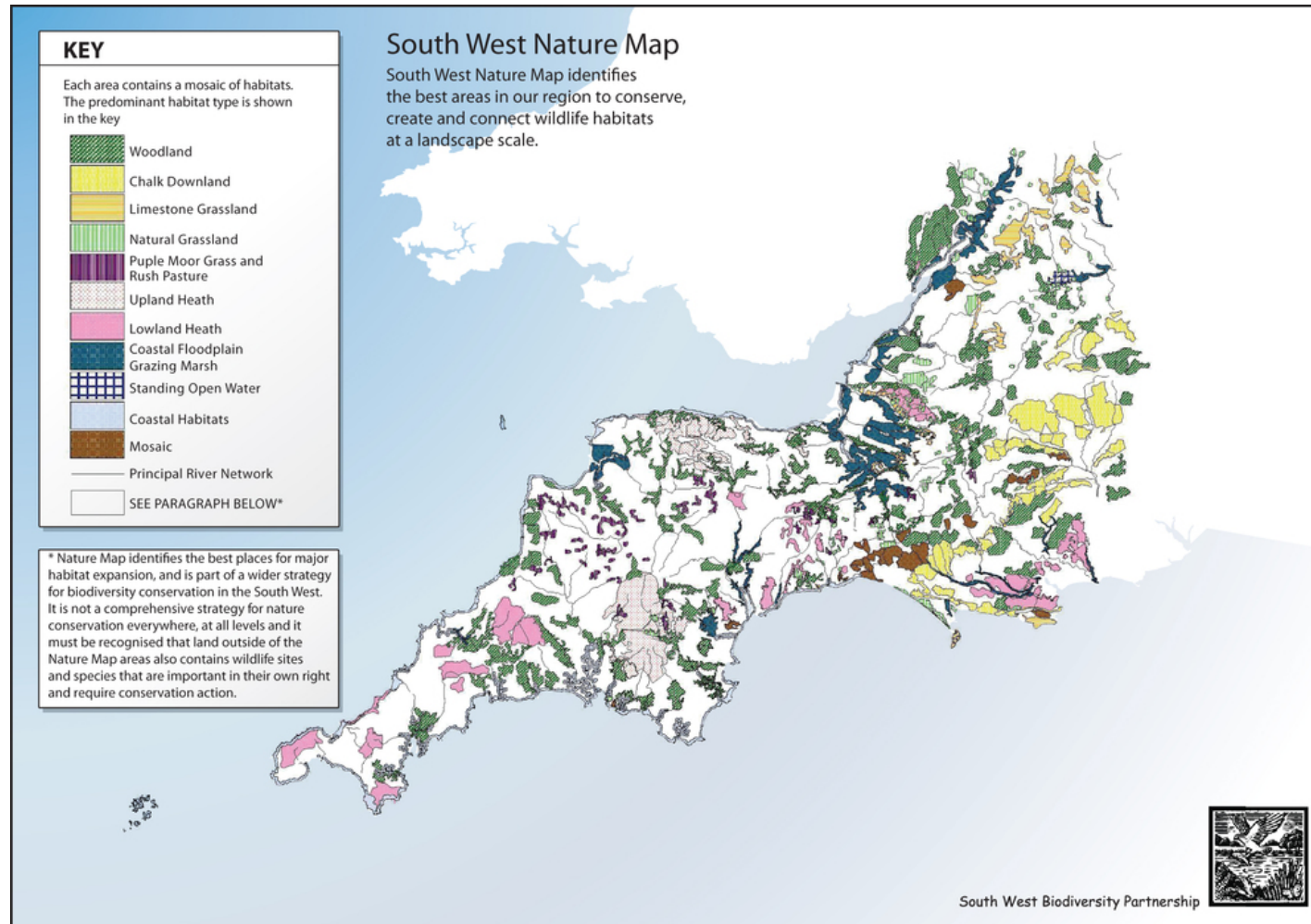
Figure TP5.1: South West Nature Map (Somerset)

Table TP5.3: Natura 2000 Sites

Site	Summary
Exmoor and Quantock Oakwoods SAC	The primary reason for selection is the presence of old sessile oak woodland and barbastelle bats. It is one of the best areas in the UK for old sessile oak woods rich in bryophytes, ferns (including <i>Dryopteris aemula</i>) and epiphytic lichens. The barbastelle bat is one of the UK's rarest mammals and few maternity roost sites are known in the UK. There is a maternity colony of barbastelle bats that utilises a range of tree roosts in this area of predominantly oak woodland on the Exmoor site. However, foraging areas can lie several kilometres from the roost sites and account of impacts on this species needs to be taken outside the boundaries of the designated site.
Exmoor Heaths SAC	Exmoor heaths are designated for the presence of Northern Atlantic wet heaths and European dry heaths. Exmoor is representative of both upland wet heath and upland dry heath in south-west England. The Exmoor Heaths are also important as the largest stronghold for the heath fritillary butterfly associated with sheltered slopes in the transition to woodland. The site holds a small breeding population of merlin <i>Falco columbarius</i> that is the most southerly in the western Palearctic.
Hestercombe House SAC	The SAC is designated for its maternity colony of lesser horseshoe bats. Foraging areas used by lesser horseshoe bats have been radio tracked to 5 to 6 kilometres from the roost site, and bats are feeding on the northern edge of the Taunton urban area. Therefore, account of impacts on this species needs to be taken outside the boundaries of the designated site. The species is reliant on contiguous flight corridors and is averse to artificial lighting. A full Appropriate Assessment has been undertaken on this site (September 2009) including on the effects from the Taunton Transport Strategy Review 2, which includes projects to be forwarded to Somerset County Council Transport Policies. A Northern Outer Distributor Road of Taunton was rejected from being put forward as having a significant effect on the conservation objectives of this SAC under the Habitats Regulations.
Holme Moor and Clean Moor SAC	A relatively small site but important as an outlier of calcareous fens in south-west England. The site occupies an unusual ecological situation on the spring line at the foot of a scarp slope.
Mells Valley SAC	The site is selected on the basis of the size of its exceptional breeding population of greater horseshoe bats. It contains the maternity site associated with a population comprising about 12% of the UK population. A proportion of the population also hibernates at the site, though many disperse through other hibernacula through the Mendips to Cheddar and some as far as Bath, Brockleigh Hall and perhaps Worcester in Gloucestershire. Greater horseshoe bats travel away from the roost towards foraging grounds along distinct flight paths. The species is reliant on these contiguous flight corridors and is averse to artificial lighting.
Mendip Limestone Grasslands SAC	The primary reason for the designation is semi-natural dry grasslands and scrubland facies on calcareous substrates. This site comprises coastal and inland sections of the Carboniferous Limestone outcrops of the Mendips. Transitions to European dry heaths occur on flatter terrain. The site also has caves (not open to the public) present on the Crook Peak to Shute Shelve Hill component. These are selected as features of the SAC as they provide important hibernation sites for greater and lesser horseshoe bats. Greater horseshoe bats are also a feature of the SAC. Horseshoe bats forage in the winter when temperatures are over 5°C. This

Table TP5.3: Natura 2000 Sites	
Site	Summary
	species is reliant on these contiguous flight corridors and is averse to artificial lighting.
Mendip Woodlands SAC	The SAC is a relatively extensive example of Tilio-Acerion ash dominated forests on limestone. A rich variety of other trees and shrubs are present, including elm <i>Ulmus</i> spp. and, locally, small-leaved lime <i>Tilia cordata</i> .
North Somerset and Mendip Bats SAC	<p>This site was selected on the basis of the size of population represented (3% of the UK greater horseshoe bat) and its good conservation of structure and function, having both maternity and hibernation sites. This site contains an exceptionally good range of the sites used by the population, comprising two maternity sites in lowland north Somerset and a variety of cave and mine hibernation sites in the Mendip Hills. The limestone caves of the Mendips provide a range of important hibernation sites for lesser horseshoe bat. The Cheddar Complex component site supports a number of possible bat hibernacula and a single maternity roost. The maternity roost is located in the show caves. At Wookey Hole the roost site is located off the show caves.</p> <p>The Cheddar complex and Wookey Hole areas support a wide range of semi-natural habitats including Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>). Caves not open to the public are selected as features of the SAC as they provide important hibernation sites for greater and lesser horseshoe bats.</p>
Quants SAC	This site supports a medium-sized but strong marsh fritillary butterfly population in a neutral grassland/fen mosaic. It is strategically placed close to other smaller sub-populations, with which it forms a metapopulation, and may exchange individuals with the large population at Southey Moor (outside the SAC series).
Severn Estuary SPA, candidate SAC, Ramsar	The Severn Estuary site extends in Somerset from its border with North Somerset along the coast to Hinkley Point, as part of the Bridgwater Bay component site, with a boundary just east of Lillstock. The primary reasons for selection of the SPA and Ramsar designation in West Somerset is the presence of wintering and migrating birds. There are also areas of mud and sand flats along the coast either side of Hinkley Point power station, which are protected under the cSAC designation.
Somerset Levels and Moors SPA, Ramsar	The SPA is designated for the presence of waders and waterfowl, of which it supports internationally important populations, including, under its SPA designation, over wintering Bewick's swan and golden plover, migratory shoveler, teal and wigeon and numbers of waterfowl, and under its Ramsar designation teal, lapwing and Bewick's swan and again the significant numbers of waterfowl generally. The Ramsar is also designated for its rare ditch invertebrates, particularly water beetles, present in the ditches and rhynes. The Levels and Moors is one of the largest and richest areas of traditionally managed wet grassland and fen habitats in lowland UK.

Figure TP5.2: Internationally Designated Sites in Somerset (North)

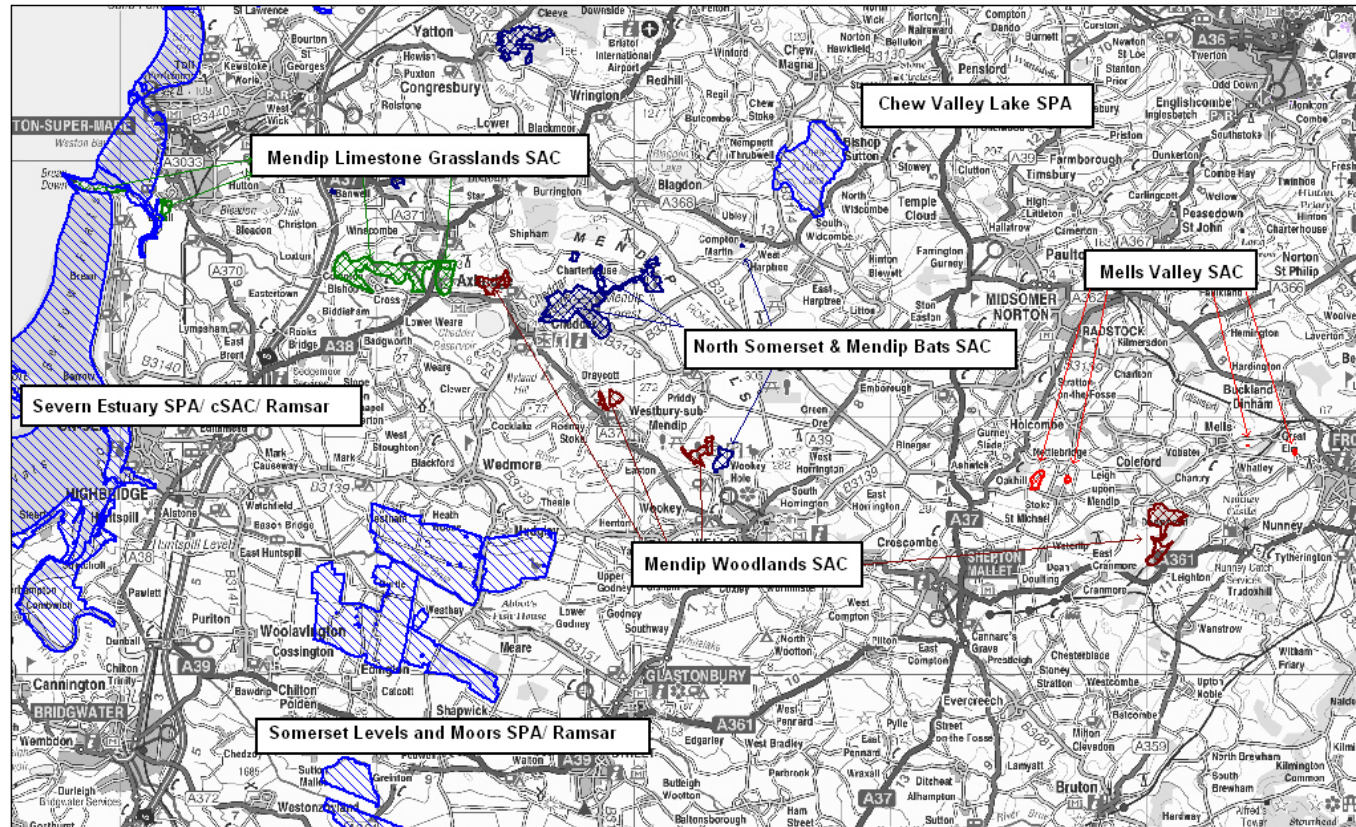
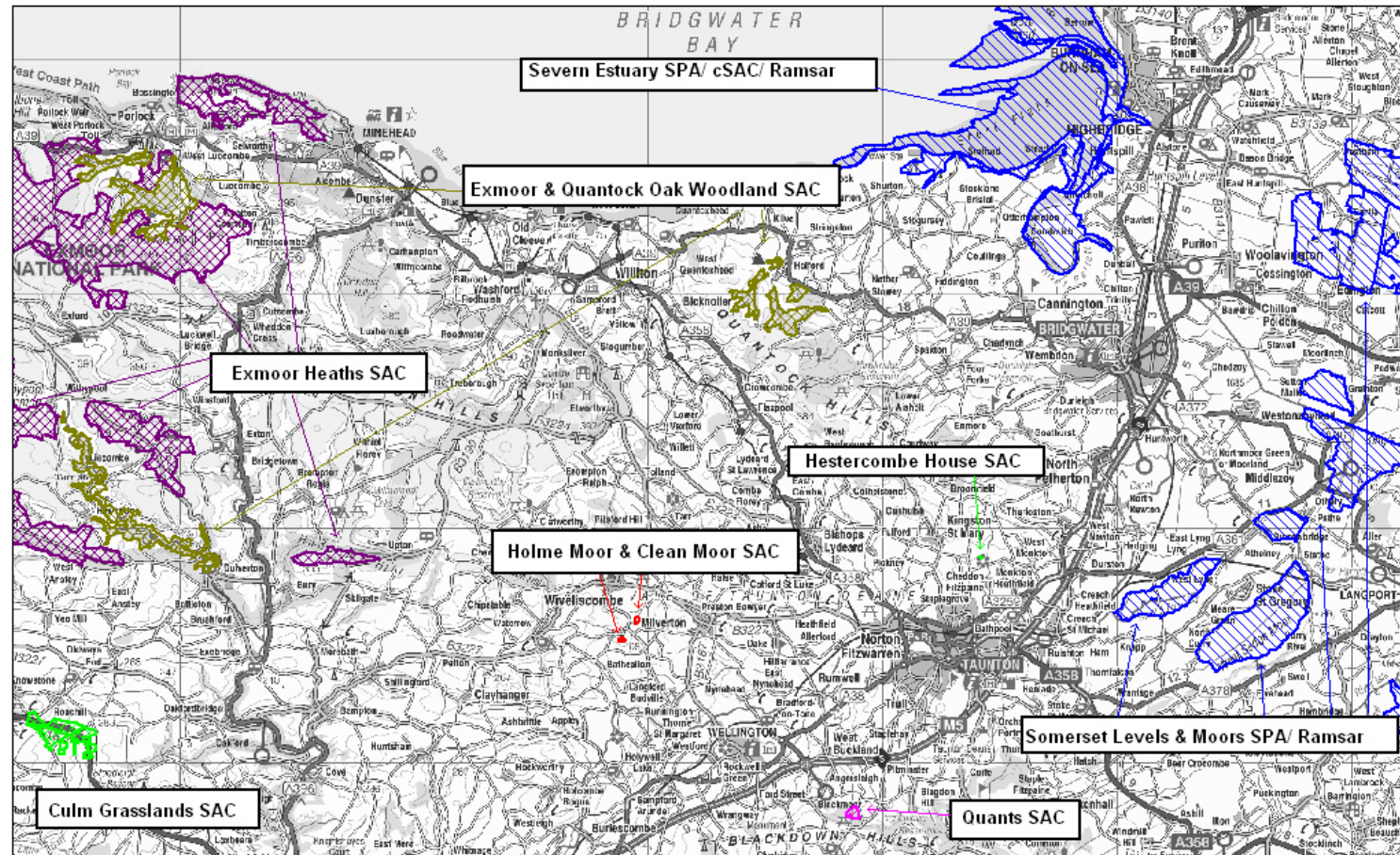


Figure TP5.3: Internationally Designated Sites in Somerset (South)



4.1.4 Nationally Designated Sites

Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSIs) are the country's very best wildlife and geological sites. SSSIs are important as they support plants and animals that find it more difficult to survive in the wider countryside. Protecting and managing SSSIs is a shared responsibility, and an investment for the benefit of future generations. Somerset contains 127 SSSIs. <http://www.natureonthemap.org.uk/map.aspx>.

http://www.sssi.naturalengland.org.uk/Special/sssi/searchresults.cfm?sssi_name=&frmcounty=1035

These are shown in Figure TP5.4. SSSIs are shown in yellow shading. Those with an active management agreement are shown with light green hatching.

Figure TP.4: SSSIs in Somerset



Source: Nature on the Map. Crown Copyright and database right 2008. All rights reserved. Ordnance Survey Licence number 100022021. © Crown copyright. Licence number 100022432.

Within Somerset 91 SSSIs have boundaries with the County's highways network. Others have public rights of way, including cycleways, running through or bordering them.

A programme to assess the condition of all SSSIs was started by English Nature in 1997 and by 2003 all SSSIs in the country had been assessed. Each local authority now has a Public

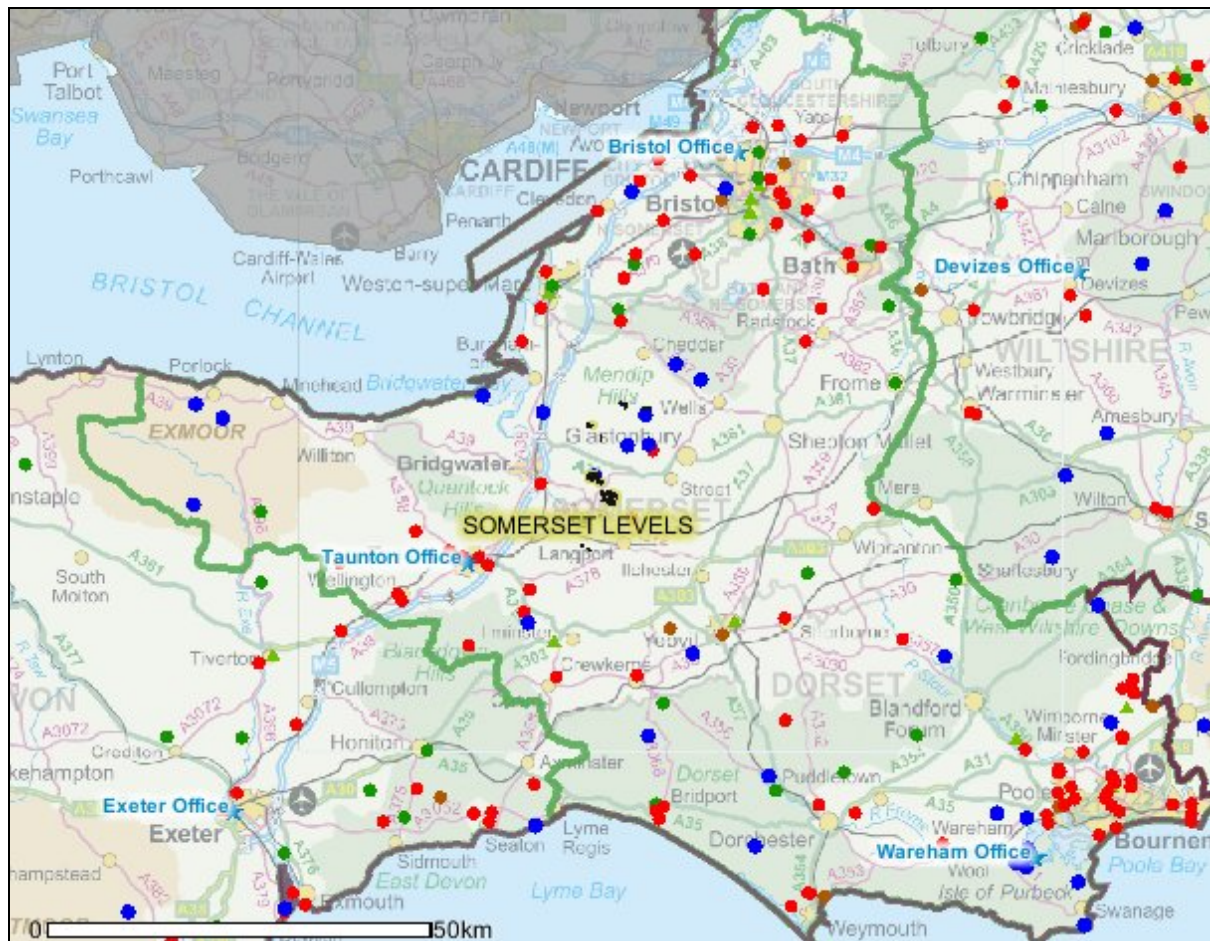
Service Agreement (PSA) target, which states that 95% of SSSIs will be bought into favourable condition by 2010. Only 45.17% of SSSIs in Somerset are in favourable condition. However, 32.61% are unfavourable but recovering (Natural England data, dated June 2009).

Natural Nature Reserves

National Nature Reserves (NNRs) are places designated because they are among the best examples of a particular habitat. They are often designated Natura 2000 sites or SSSI. NNRs are carefully managed on behalf of the nation and are either owned or controlled by Natural England or held by approved bodies such as Wildlife Trusts. They were established to protect the most important areas of wildlife habitat and geological formations in Britain and as places for scientific research. Natural Nature Reserves in Somerset are as follows:

- Barrington Hill
- Bridgwater Bay
- Dunkery & Horner Woods
- Ebbor Gorge
- Ham Wall
- Hardington Moor
- Hawkcombe Woods
- Huntspill River
- Rodney Stoke
- Shapwick Heath
- Somerset Levels
- Tarr Steps Woodland
- Westhay Moor

The distribution of National Nature Reserves and Local Nature Reserves is shown in Figure TP5.5. Blue dots are National Nature Reserves, red dots are Local Nature Reserves, brown dots are Country Parks, green dots are Millennium Greens and green triangles are doorstep greens.

Figure TP5.5: National and Local Nature Reserves

Source: Nature on the Map. Crown Copyright and database right 2008. All rights reserved. Ordnance Survey Licence number 100022021. © Crown copyright. Licence number 100022432.

Natural England want people to visit NNRs. The majority of NNRs have some form of access and many have extensive path networks and access land. Most NNRs provide excellent opportunities to experience wildlife of all sorts at first hand and to learn more about nature and geological conservation. Natural England believe that these opportunities should be available for everyone including visitors with physical disabilities or special needs. Natural England has an 'access for all' policy on its NNRs. However, many NNRs, by their very nature, are difficult to access due either to their remoteness, rugged terrain or the fragility of their habitats.

4.1.5 Local Sites

Local Wildlife Sites

Local Wildlife Sites (LWS) (formerly County Wildlife Sites) have no statutory designation but are recognised as being of County importance for wildlife and biodiversity. Somerset has a total of over 2050 Local Wildlife Sites (data provided by SERC, June 2006) of which 16 are located entirely within highway land and others have boundaries with the highway. These

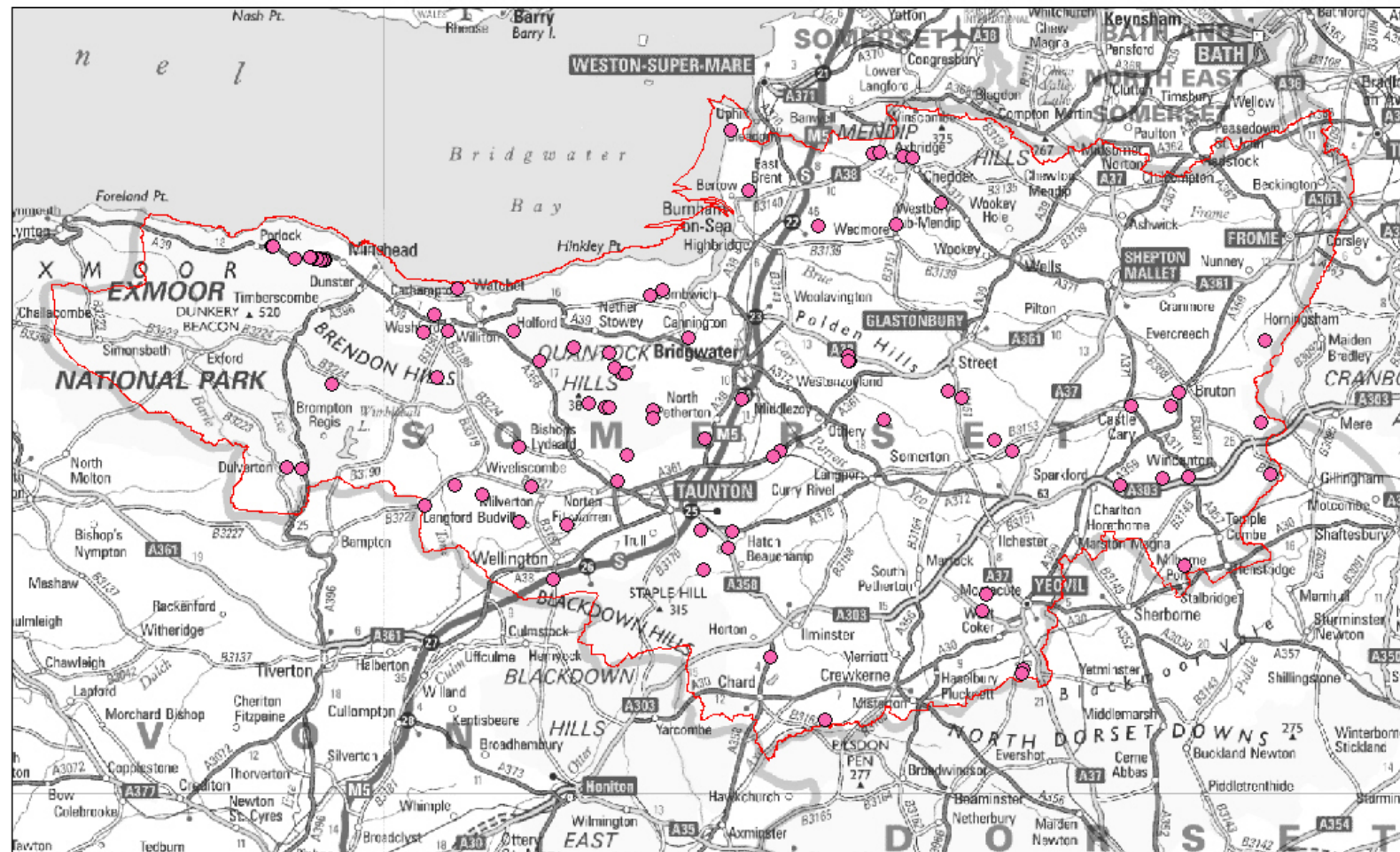
sites cover the range of semi natural habitats, or support habitat used by important species, found in Somerset.

Special Road Verges

The County has a network of 660 km of 'A' roads and 5840 km of other roads, a large proportion of which have verges that may be of value to wildlife. These habitats are normally small, linear and narrow in extent but more extensive areas do occur. Road verges in Local Authority responsibility can be managed to benefit their own wildlife and also to act as key links between other habitats, particularly as functional habitat links for species of conservation concern. Conversely the maintenance of some verges can be detrimental to wildlife species. For example, barn owls are at risk of being road casualties along verges managed as grassland.

Special Road Verges are identified sites within the highways that are of biodiversity interest, usually containing wild flowers of importance, such as orchids. These sites are managed by Somerset Highways in such a way as to the benefit of the species present on the site. They include sites those already designated as Local Wildlife Sites within the highway. There are 86 Special Road Verges in Somerset listed for their wildlife interest and are shown on Figure TP5.6.

Figure TP5.6: Special Road Verges in Somerset



4.1.6 Important Semi Natural Habitats in Somerset

The majority of semi-natural habitats declined significantly in Somerset as a whole in the last decades of the 20th century. While it is known that some, such as unimproved neutral grassland, are still in decline, monitoring effort in Somerset has not been sufficient to determine recent trends (Somerset Environmental Record Centre and Somerset County Council, 2005).

Many priority habitats occur next to highways, cycle routes, green lanes or other transport corridors. Table TP5.4 includes brief descriptions of these priority habitats and Figure TP5.7 shows their broad distribution within the County.

4.1.7 Habitat Action Plans

The 2008 Somerset Biodiversity Strategy drew action plans up for the following broad habitats:

- Coastal & Marine
- Ditches & Ponds (focusing on rare plants and invertebrates)
- Gardens & Urban Greenspace
- Hedgerows & Hedgerow Trees
- Roadside Verges & Green Lanes
- Traditional Orchards
- Water & Wetlands
- Wood Pasture, Parkland & Veteran Trees
- Woodland

Whilst the Roadside Verges & Green Lanes action plan is directly concerned with the management of highways and rural lanes other action plans, such as Hedgerows & Hedgerow Trees; Ditches & Ponds; and Gardens & Urban Greenspace, can also be relevant to transport planning.

Table TP5.4: Semi Natural Habitats in Somerset

Habitat	Summary
Woodland Habitats	<p>Lowland Mixed Deciduous Woodland includes woodland growing on the full range of soil conditions and takes in most semi-natural woodland in Somerset. It occurs largely within enclosed landscapes, usually on sites with well-defined boundaries. Many are ancient woods. The woods tend to be small, less than 20 hectares and often there is evidence of past coppicing. There is great variety in the species composition of the canopy layer and the ground flora. Lowland mixed deciduous woodland is among the richest habitats for wildlife. The type includes the best examples of Bluebell woods for which the UK has particular responsibility. The habitat occurs adjacent to roads and verges and may include under storey or ground flora communities.</p> <p>Upland Oak Woodland is woodland dominated by a canopy of oak and birch trees. They usually occur above an elevation of 200m but may found as low as sea level in harsher conditions such as on steep slopes and on thin acidic soils. Understorey mainly consists of rowan, holly and hazel with a varying ground flora according to soil and grazing use. The habitat is internationally important for its distinctive plant and animal communities. It is on Annex I of the EC Habitats Directive as a priority habitat. It occurs adjacent to roads and verges may include under storey and ground flora communities.</p> <p>Upland Mixed Ashwoods is woodland where ash dominates, although oak, birch, elm, small-leaved lime and hazel may be the most abundant species. However, the ground flora remains broadly similar. Mixed ashwoods are amongst the most diverse habitats for wildlife in the uplands, and are notable for flowers, including rare woodland species. The habitat occurs adjacent to roads and verges and may include under storey or ground flora communities.</p>
Grassland Habitats	<p>Lowland Wood Pasture and Parkland consists of large old trees sometimes mixed with smaller trees, in an open habitat, which has been traditionally maintained as pasture. The habitat is vital to the survival of many species particularly invertebrates, fungi, lichens and a variety of rare birds and bats. This habitat is susceptible to severance. It occurs adjacent to highways but may occasionally have a carriageway running through the habitat.</p> <p>Ancient and/or Species Rich Hedgerows tend to be old hedgerows though not exclusively so. Some ancient hedgerows are not species rich but are intrinsically valuable because of their historic significance. Ancient hedgerows are usually those planted prior to the Enclosure Acts 1720 – 1840. The UK Biodiversity Action Plan describes a species rich hedge as one containing five or more woody species in a 30-metre length. The habitat occurs regularly as highway boundary.</p> <p>Lowland Meadows have evolved over many decades of management and practice to support species of rare and distinct wild flower and grasses, invertebrates, includes mammals such as the brown hare and can be important feeding grounds for birds in seasons when flooding occurs. The habitat cannot be re-created and is listed in Annex 1 of the EC Habitats Directive. The habitat may occur as highway verge habitat.</p> <p>Lowland Calcareous Grassland is a habitat of rich flora and specialist invertebrate species found on lime rich soils, such as over limestone in Somerset, which have evolved from many decades of continuous consistent management and are effectively irreplaceable. The habitat</p>

Table TP5.4: Semi Natural Habitats in Somerset

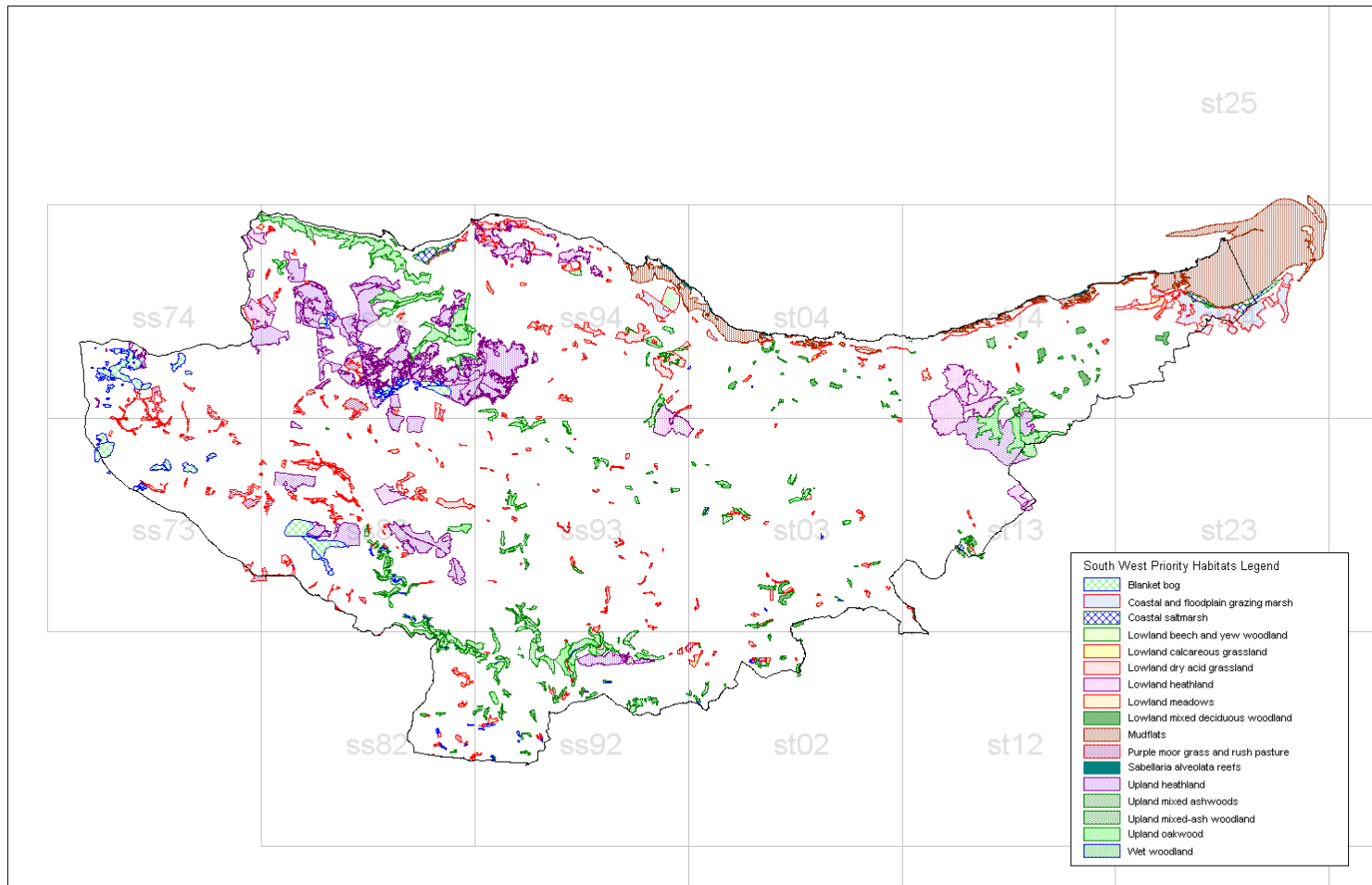
Habitat	Summary
	<p>is listed as a priority type in Annex 1 of the EC Habitats Directive if orchids are present. The habitat may occur as highway verge habitat.</p> <p>Lowland Dry Acid Grassland usually occurs on nutrient-poor, generally free-draining soils with pH ranging from 4 to 5.5 and is characterised by a range of plant species such as heath bedstraw, sheep's-fescue, sheep's sorrel, and wavy hair-grass, with presence and abundance varying with locality. Dwarf shrubs such as heather and bilberry can also occur but at low abundance. Bird species of conservation concern, which potentially utilise dry acid grassland for breeding or wintering, include nightjar, skylark and merlin. Many of the invertebrates that occur in acid grassland are specialist species, which do not occur in other types of grassland. Dry acid grassland is of national importance with many areas being designated SSSI or SPA and can contain rare plant species. The habitat may occur adjacent or within highway verges.</p> <p>Purple Moor Grass and Rush Pasture occurs on poorly drained acidic soils. Its vegetation has a distinctive character consisting of various species-rich types of fen meadow and rush pasture. It is important habitat for the marsh fritillary butterfly and narrow-bordered bee hawk-moth (on of the bee Hawk-moth's sources of food, the devil's bit scabious grows in these areas). The habitat is of national importance with many areas being designated SSSI or SPA and can contain rare plant species. The habitat may occur adjacent or within highway verges.</p>
Heaths	<p>Lowland Heathland is characterised by the presence of plants such as heather, dwarf gorses, and cross-leaved heath and is usually found below 300m elevations. Areas of good quality heathland should consist of an ericaceous layer of varying heights and structures, some areas of scattered trees and scrub, areas of bare ground, gorse, wet heaths, bogs and open water. A large proportion have been designated SSSIs, but heaths can be found outside of these areas. Roads run through the habitat without the presence of boundary features. For example the Croscombe to Nether Stowey road is one of the most sensitive roads affecting this habitat.</p> <p>Upland Heathland as a priority habitat is defined as lying above the upper edge of enclosed agricultural land (generally at around 250-400 m). In Somerset it occurs on Exmoor. A range of dwarf shrubs such as heather, bilberry, cowberry, bell heather and western gorse typically dominates Upland Heathland. It provides habitat for important bird species such as merlin and hen harrier. Some forms of heath also have a significant lower plant interest, including assemblages of rare and local mosses and liverworts that are particularly associated with the wetter western heaths. The invertebrate fauna is especially diverse. Roads typically run through the habitat without the presence of boundary features.</p>
Wetland habitats	<p>Coastal and Floodplain Grazing Marsh is a habitat of low lying grasslands, landward of coastal defences or natural barriers drained by ditches, either of brackish or fresh water and dependant on proximity to the sea or intrusion of tidal sea water. They are periodically flooded and the grassland can be improved or unimproved. The habitat is maintained by summer grazing by cattle or sheep and is important for wintering wildfowl. Areas may include SPA and Ramsar sites. The habitat occurs both within highway land and adjacent to roads. It is the most extensive UK BAP habitat in Somerset.</p> <p>Reedbeds are wetlands dominated by stands of the common reed, wherein the water table is at or above ground level for most of the</p>

Table TP5.4: Semi Natural Habitats in Somerset

Habitat	Summary
	<p>year. They tend to incorporate areas of open water and ditches, sometimes in association with areas of wet grassland and carr woodland. They are an important habitat for birds such as warblers, marsh harrier and bittern. Reedbeds can be incorporated into highways schemes as part of Sustainable Drainage Systems or as an enhancement measure.</p> <p>Wet Woodland occurs on seasonally wet or poorly drained soils, usually with alder, willows and birch as the predominant tree species, but sometimes including ash and oak on the drier riparian areas. It is found on floodplains, as successional habitat on fens, mires and bogs, along streams and hillside flushes, and in peaty hollows. A large number of invertebrates are associated with the habitat such as craneflies and beetles. Otters <i>Lutra lutra</i> may also be found using the habitat. They may be affected by drainage schemes. The habitat can occur adjacent to roads and verges may include under storey or ground flora communities.</p>
Freshwater habitats	<p>Eutrophic Standing Waters have high biodiversity value with planktonic algae and zooplankton abundant in the water column, diverse submerged vegetation and numerous species of invertebrate and fish. Amphibians can include great crested newts <i>Triturus cristatus</i>. One of the factors causing decline in this habitat is pollutant entering the water and also the affects of siltation from drainage schemes. Both of these may result from adjacent highways.</p> <p>Although not a UK BAP priority habitat Rivers and Streams are a wide and diverse habitat regulated by the Environment Act 1995, the Water Resources Act 1991 and the Land Drainage Act 1991. The flora and fauna varies according to geographical area, geology and water quality. Bank side and marginal vegetation supports a range of animals and plants and provide important corridors between fragmented habitats particularly in intensively farmed areas. The Environment Agency or the Internal Drainage Boards maintain stewardship and responsibility for nature conservation over main watercourses. Watercourses can occur both alongside and running under highways.</p>
Coastal habitats	<p>Maritime Cliffs and Slopes consist of the vertical and sloping coastline where breaks are formed by coastal erosion. The habitat is important for species such as the Peregrine Falcon, and a great variety of orchids. Roads may be subject to coastal erosion necessitating maintenance works and/or the construction of a new road further inland. This threatens cliff top biological communities.</p>

**Figure TP5.7:
Priority Habitats
in Somerset**

(Source: Somerset
Environmental
Records Centre)



West Somerset District
South West Priority Habitats

Date: May 2006

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4.1.8 Important Networks of Habitats

Habitat networks consist of linear wildlife corridors, such as watercourses and hedgerows and patches of habitat within the dispersal distances of species using them, and are of vital importance in a landscape of intensive agriculture, roads, urbanisation and fragmented habitats. These networks are important to allow dispersal of wildlife and genetic exchange, contributing to the viability of populations. They are also important in allowing adaptation to predicted climatic changes.

Advice has been sought from Somerset Environmental Records Centre (SERC) as to whether data are available on important network of habitats in the form of habitat opportunity maps, habitat suitability indices and integrated habitat mapping. SERC has indicated that data do not exist but that they consider habitat and land use maps to be essential to provide the information needed. However, the Somerset Econet does provide some data on indicating networks of habitat used by a particular species and, animal occurrence mapping and habitat suitability indices are being developed by SCC and SERC. Integrated Habitat System mapping would be useful in providing baseline information for the SEA but is not currently available.

4.1.9 Species

Around 10,000 species of plants, animals and fungi have been recorded so far in Somerset, a county known to be one of the richest in biodiversity in the UK (Somerset Environmental Record Centre and Somerset County Council, 2005). Many of these species are specially protected by European and/or national legislation and others are priorities for conservation effort in national and local biodiversity action plans (BAPs). Thousands of less celebrated species make up dynamic ecosystems that provide the fabric of the landscape and services, such as waste recycling, crop pollination, flood control and pollution abatement that human survival depends on. Hundreds of species are known to be in population decline in the UK but there are also some success stories, such as the return of the otter to most of Somerset's rivers in the last twenty years. Local trends are generally downwards but strategies being developed now aim to reverse the trend.

The Guide to Good Practice that accompanies "Planning Policy Statement 9: Biodiversity and Geological Conservation" considers that Local Development Frameworks (LDF) should include, where necessary, protection for areas where legally protected and Biodiversity Action Plan species occur. It can also develop guidelines for protecting and enhancing populations of protected species to assist in determining the location and design of development. These principles apply to the Somerset County Council Transport Policies as well as to the spatial planning included in Core Strategies and the two should form an integrated plan.

The Guide to Good Practice also states that, 'The principle of LDFs should be sound in terms of evidence... requires local authorities to develop a comprehensive information base on the biodiversity... of an area.' The guidance also states, '... as a matter of good practice, the status and distribution of protected species, as well as priority BAP species, should form part of the evidence gathering required for the production of the LDF.' Likewise this data should inform the development of transport schemes incorporated within Somerset County Council Transport Policies.

However, it is important to note that this section relates to the strategic Somerset County Council Transport Policies and it is important that data is collected at the appropriate scale and a balance must be struck that enables the data to guide the planning process. Therefore, data collection has focused on 'focal species'. Focal species chosen for Somerset County Council Transport Policies will be those of importance to biodiversity, which are most sensitive to impacts derived from transport development.

Meaningful assessment requires data on abundance and distribution together with an understanding of why current patterns exist and how they are likely to respond to the particular stresses and opportunities associated with the Somerset County Council Transport Policies strategy being considered (Somerset County Council, Southwest Ecological Surveys and ENVIRON, 2005). Information on species abundance and population distributions in Somerset is derived from the Somerset EConet: a GIS system developed in partnership with the Somerset Environmental Records Centre (SERC) to aid identification species' ranges and distribution across the county. Further data from Animal Occurrence mapping and habitat suitability indices can be used when available.

In order to assess the impact of the plan on biodiversity a number of focal species will be used for the SEA. The focal species are potentially affected by transport related development in Somerset. These are listed below and brief descriptions follow.

Bats: There are currently 16 species of bat known to breed in the UK of which 15 are regularly recorded in Somerset and 14 are confirmed breeding in the County. They are regarded as an indicator of the health of the countryside and the urban environment, and have recently been made a national indicator species. All bat species are protected under the Conservation (Natural Habitats, & c.) Regulations 1994 (the 'Habitat Regulations') (amended 2009) which brought into UK law the provisions of Directive 92/43/EEC on the 'Conservation of Natural Habitats and Wild Flora and Fauna' (the 'Habitats Directive'), all bat species being listed in Annex IV. They are also the subject of a Somerset Biodiversity Strategy Species Action Plan.

http://www.somerset.gov.uk/media/782/4C/Somerset_Bat_SAP.pdf

Bats can be affected by transport in a number of ways. Most species are susceptible to fragmentation of flight lines, such as mature hedgerows, which can be severed by transport infrastructure projects or hedgerow management. They are also subject to road mortality. Many species have an aversion to artificial lighting and, therefore, can be affected by street lighting, resulting in changes in emergence behaviour and severance from feeding areas.

Otter: Otters are protected under the Conservation (Natural Habitats, & c.) Regulations 1994 (the 'Habitat Regulations') (amended 2009) which brought into UK law the provisions of Directive 92/43/EEC on the 'Conservation of Natural Habitats and Wild Flora and Fauna' (the 'Habitats Directive'), otters being listed in Annex IV. They are also the subject of a Somerset Biodiversity Strategy Species Action Plan.

http://www.somerset.gov.uk/media/782/5E/Somerset_Otter_SAP.pdf

Otters are affected by highways principally in causing mortality on the highway. It is estimated that between 20% and 40% of the Somerset otter population are killed on roads each year.

Great Crested Newts: Great crested newts are protected under the Conservation (Natural Habitats, & c.) Regulations 1994 (the 'Habitat Regulations') (amended 2009) which brought into UK law the provisions of Directive 92/43/EEC on the 'Conservation of Natural Habitats and Wild Flora and Fauna' (the 'Habitats Directive'), otters being listed in Annex IV. They are widespread in Somerset.

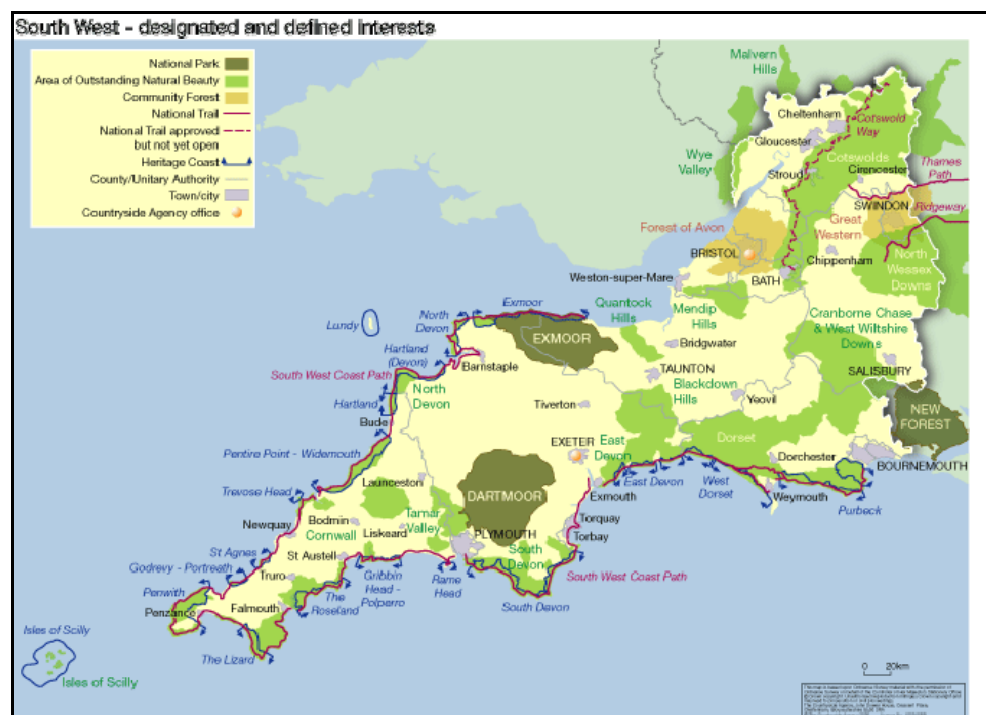
Great crested newts are affected by infrastructure especially drainage and kerbing which can trap them within the highway leading to mortality. They should be treated as a landscape scale species requiring a network of ponds and suitable terrestrial habitat to maintain populations, juveniles dispersing up to 1.3 kilometres from their natal pond.

4.2 Landscape Data

4.2.1 Protected Landscapes

The South West is England's largest and most rural region, with most of the districts classified as rural. The region has a high proportion of protected landscape; approximately 40% of the landscape has special protection (<http://www.countryside.gov.uk/>). The region has 12 complete Areas of Outstanding Natural Beauty (AONB), England's first natural World Heritage Site, two National Parks and two-thirds of the nation's Heritage Coast. Somerset lies within a landscape of high quality, containing five protected landscapes: Exmoor National Park and the following AONBs - Quantock Hills, Mendip Hills, Blackdown Hills and a small area of the Cranborne Chase and West Wiltshire Downs. These can be seen on Figure TP5.8.

Figure TP5.8: Protected Landscapes



(Source: Countryside Agency <http://www.countryside.gov.uk/LAR/regions/southWest/maps/index.asp#>)

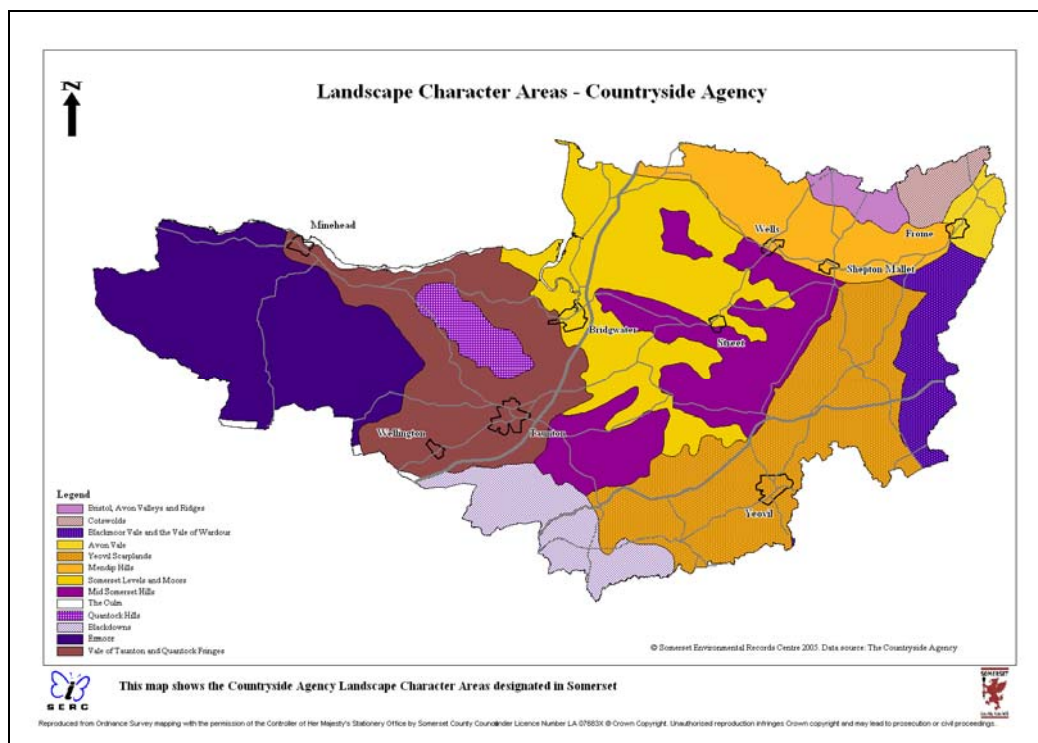
All of the management plans highlight some pressures that occur on the landscape due to transport. Transport affects these landscapes in the following ways:

- 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.

4.2.2 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 Somerset are shown in Figure TP5.9.

Figure TP5.9: Landscape Character Areas



(Source: Somerset Environmental Records Centre)

The Countryside Character Areas found in Somerset are:

- 117. Avon Vales;
- 118. Bristol, Avon Valley and Ridges;
- 133. Blackmoor Vale and the Vale of Wardour;
- 140. Yeovil Scarplands;
- 141. Mendip Hills;
- 142/143. Somerset Levels and Moors/Mid Somerset Hills;

- 144. Quantock Hills;
- 145. Exmoor;
- 146. Vale of Taunton and Quantock Fringes;
- 147. Blackdowns; and
- 149. The Culm.

Each Countryside Character Area has a factsheet produced by Natural England (see <http://www.naturalengland.org.uk/ourwork/landscape/englands/character/areas/southwest.aspx>) 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.

Table TP5.6: Countryside Character Area Issues	
Character Area	Transport issues identified
117. Avon Vales	Several major roads cut through the area and there is pressure for roadside development. Infill between settlements and bypasses or realigned roads is widespread. New roads need to take account of the subtleties in the landform.
118. Bristol, Avon Valley and Ridges	None identified
133. Blackmoor Vale and the Vale of Wardour	Improvements to the A303 and A30 could have a significant effect on the landscape.
140. Yeovil Scarplands	None identified
141. Mendip Hills	Quarrying in East Mendip is a major industry, with large and active superquarries seeking to expand still further. Associated effects include heavy quarry traffic.
142/143. Somerset Levels and Moors/ Mid Somerset Hills	Some modern development has been inappropriate to the character of the villages. Urban edge development and new roads can be very intrusive in an open landscape.
144. Quantock Hills	Completion of the ring fence and grids on roads will enable pony grazing to be re-established which will help keep scrub encroachment at bay.
145. Exmoor	<p>Visitor pressure within and outside the National Park is causing erosion on trackways and parking areas. There is also erosion from 4-wheel drive vehicles and from the sheer number of people at the most popular areas. Visitor pressure on the coast requires particularly careful management.</p> <p>Pressure and congestion at tourist 'hotspots' like Dunster need to be addressed, preferably through broad environmental improvements.</p>
146. Vale of Taunton and Quantock Fringes	<p>Hedgerow trees are important. Losses from Dutch Elm disease have been significant and there are few replacements for the present mature trees.</p> <p>Major development since the second world war has introduced new</p>

Table TP5.6: Countryside Character Area Issues

Character Area	Transport issues identified
	<p>elements into the landscape, including mineral extraction, industrial development, road construction and power lines.</p> <p>Development around Taunton and along the M5 corridor is particularly prominent. The edge of Taunton has many urban fringe pressures and the countryside gap between Taunton and Wellington is in danger of being narrowed.</p>
147. Blackdowns	In the valleys, the number of trees has declined as a result of Dutch Elm disease. Where hedgerow trees remain, there appear to be few replacements. A programme of replacement planting would be of great landscape benefit.
149. The Culm	None identified

4.2.3 Public Rights of Way and Green Infrastructure

Green infrastructure consists of strategic networks of accessible, multifunctional sites (including parks, woodland, informal open spaces, nature reserves and historic sites) as well as linkages (such as river corridors and floodplains, wildlife corridors and greenways). These contribute to people's well-being, and together comprise a coherent managed resource responsive to evolving conditions (definition taken from South West RSS Proposed Changes).

There is no baseline information available on green infrastructure in Somerset. However, the latest version of the Regional Spatial Strategy (the Secretary of State's Proposed Changes) includes the policy GI1 which states that development of networks of Green Infrastructure (GI) will be required to enhance quality of life in the region and support the successful accommodation of change and plans, strategies, proposals and schemes should aim to deliver wider spatial outcomes that incorporate environmental and socio-economic benefits by conserving and managing existing GI; creating new GI; and enhancing its functionality, quality and connectivity. The policy states that local authorities will:

- Draw upon existing expertise and initiatives to take forward GI planning and identify priorities and partnerships for GI;
- Incorporate GI policies setting out broad locations for GI appropriate to the extent and distribution of development proposed, coordinated across administrative boundaries as appropriate;
- Integrate proposals to improve GI in the delivery of new developments, particularly through area based regeneration initiatives and major development proposals;
- Ensure that a key aim of green infrastructure is the maintenance and improvement of biodiversity;
- Protect the integrity of sites of international importance and provide new areas of appropriate greenspace where development would otherwise cause unacceptable recreational pressure on sites of international ecological importance;
- Maximise the role of GI in mitigating and adapting to climate change; and
- Develop a GI Plan with a delivery programme to support GI policies.

In terms of public rights of way, Somerset has one of the longest rights of way networks in the country. It currently stands at 6115 km (3800 m). A similar size county in terms of area is Cornwall with 4238 km (2633 m). By comparison Devon is almost 50% larger in area but has 4900 km (3045 m) of rights of way. A Rights of Way Improvement Plan was published with the Second Local Transport Plan in 2006 and this will need to be updated for Somerset County Council Transport Policies. The Plan sets out the context of the existing public rights of way network in Somerset and outlines how best to improve the network in the future. The plan reports that the Best Value indicator “ease of use percentage of the public rights of way network in Somerset” remains in the bottom quartile of shire counties, which illustrates that the focus needs to be on improving the statutory duties of maintenance and removal of obstructions before any significant resource is directed to developing the network. A challenging target of 84% of the network easy to use by 2010/11 has been set and funding from the Second Local Transport Plan will help towards achieving this. There is also a need for a new indicator for use in Somerset County Council Transport Policies. The new indicator is expected to be outcome base, such as use levels, it is expected that the new indicator will also be accepted as a local indicator in Somerset County Council Transport Policies.

Cycle and walking routes in Somerset are popular with visitors and residents alike and some of the most popular routes are.

Walking Trails

- South West Coast Path
- Two Moors Way
- The Leland Trail
- The Liberty Trail
- Taunton to Bridgwater Canal Towpath
- Grand Western Canal
- The Macmillan Way
- The Macmillan Way (west)
- The Parrett Trail
- West Mendip Way
- East Mendip Way
- Circular Walks in South Somerset
- The West Deane Way
- Exmoor National Park Network
- Quantock Greenway
- Coleridge Way

Off-road Cycle Routes

- Taunton to Bridgwater Canal
- Axbridge to Cheddar
- Cossington to Bawdrip
- Winscombe to Axbridge
- The Willows Walk
- Wells to Dulcote
- Langport to Muchelney
- Ilminster to Peasmarsh
- Dunster Woods Circuit
- Wimbleball Lake
- Various Exmoor Routes
- Chard to Ilminster
- Frome to Bath

On-road Cycle Routes

- Various routes in all districts particularly in South Somerset
- Wessex Route

National Cycle Network

- Route 3 - 'The West Country Way' (Bristol to Padstow) passes through Somerset from the Mendips to Exmoor via Bridgwater and Taunton

4.3 Heritage Data

4.3.1 Listed Buildings and Scheduled Monuments

Information on listed buildings and scheduled monuments in Somerset is shown in Table TP5.7.

Table TP5.7: Heritage Designations in Somerset					
Authority	Listed Buildings			Scheduled monuments	Conservation Areas
	Grade I	Grade II*	Grade II		
Somerset	309	768	10528	605	177
West Somerset	34	99	1101	197	9
Taunton Deane	37	115	1493	32	42
Sedgemoor	53	88	1004	77	12
Mendip	91	206	2642	231	28
South Somerset	94	260	4288	68	86

4.3.2 Impact of Traffic on Townscape

The Taunton Transport Strategy Review 2 Final Report (Atkins, 2008) has carried out some work on how traffic affects the visual appearance of streetscapes. This work analyses traffic in the town centres of Taunton, Bridgwater and Wellington. Traffic is only one of the factors that affect the perceived quality of the visual environment. Other factors include the quality of the built environment including street furniture and levels of litter and graffiti.

Based on modelling overall traffic levels in central Taunton are expected to grow by around 23% between 2006 and 2026. Consequently the visual appearance of Taunton will be adversely affected. Topic paper 2 on community addresses community severance and lists in more detail where these changes will occur. Bridgwater will also experience increases in traffic. However, in Wellington conditions on High St produce a decline in flows of 38%.

With its implementation the Third Way will divert traffic away from the key shopping streets in Taunton and create a cleaner and safer environment for pedestrians and cyclists.

4.3.3 Registered Landscapes

In 2008, the South West has a total of 292 registered parks and gardens (an increase of 5.8% compared to 2002). This is 18.3% of England's total (a much greater proportion of England's average) (Source: Heritage Counts 2008 – South West).

In 2009 there were 38 registered parks and gardens in Somerset (Source: Somerset Gardens Trust) and this has not changed since 2004.

5 Data Sources and Gaps

5.1 Data Sources

- Countryside Council for Wales, English Nature, Environment Agency & Royal Society for the Protection of Birds (2004): Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners. South West Ecological Surveys, Levett-Therivel Sustainability Consultants & Oxford Brookes University;
- Office of the Deputy Prime Minister (2006): Planning for biodiversity and geological conservation: A Good Practice Guide;
- Somerset Environmental Records Centre (2005): Environmental Baseline for Somerset. Draft Report March 2005;
- Somerset County Council (2008). Somerset Biodiversity Strategy http://www.somerset.gov.uk/media/740/9E/Somerset_biodiversity_strategy_final_version.pdf;
- Somerset County Council. (2009) Somerset Econet;
- Somerset County Council, Southwest Ecological Surveys and ENVIRON (2005): Somerset LTP2 SEA Environmental Report;
- www.swenvo.org.uk;
- <http://www.natureonthemap.org.uk/map.aspx>;
- http://www.somerset.gov.uk/media/782/5E/Somerset_Otter_SAP.pdf;
- http://www.somerset.gov.uk/media/782/4C/Somerset_Bat_SAP.pdf
- <http://www.dft.gov.uk/pgr/regional/ltp/guidance/fltp/fullguidanceonlocaltransport3657?page=17>;
- The Countryside Quality Counts website (www.countryside-quality-counts.org.uk);
- Natural England website (www.natural-england.org.uk);
- Exmoor National Park Management Plan (2007-2012) (Exmoor National Park Authority, 2007);
- Quantock Hills AONB Management Plan (2009-2014) (Quantock Hills AONB Service, 2009);
- Mendip Hills AONB Management Plan (2004-2009) (Quantock Hills AONB Service, 2009);

- Blackdown Hills AONB Management Plan (2009-2014) (Blackdown Hills AONB Service, 2009);
- Cranborne Chase and West Wiltshire Downs AONB Management Plan (2009-2014) (Cranborne Chase and West Wiltshire Downs AONB Service, 2009);
- Heritage Counts 2008 in South West: http://www.english-heritage.org.uk/hc/upload/pdf/HC08_SouthWest_Acc.pdf?1240327882 ;
- Somerset County Council: www.somerset.gov.uk;
- Somerset Historic Environment Record;
- English Heritage Buildings at Risk Register 2008; and
- Somerset Rights of Way Improvement Plan (Somerset County Council, 2006).

5.2 Data Gaps

The following data gaps have been identified:

- While it is known that some semi natural habitats are still in decline, monitoring effort in Somerset has not been sufficient to determine recent trends (Somerset Environmental Record Centre and Somerset County Council, 2005);
- SERC and Somerset County Council have been developing Habitat Suitability Indices for important species, which when complete will give an indication of abundance and habitat use across the district and could be used to monitor changes in species populations as affected by development at a strategic level. This data should be added to the baseline data when complete;
- Somerset County Council have been developing Animal Occurrence mapping giving more detailed data than Econet. This data should be added to the baseline data when complete; and
- The Biodiversity Reporting Action System (BARS) produced by Natural England is being used for BAP monitoring <http://www.ukbap-reporting.org.uk> and will become an important data source in the future. However, data within the system related to West Somerset is currently limited.

6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown in Table TP5.8. These issues will be used to guide the selection of the SA Objectives that the plan will be assessed against.

Table TP5.8: Issues and Future Baseline	
Issue	Likely Future Baseline
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	There have been significant declines in certain habitats and species in past years and much of the South West wildlife is still under threat. Without active management it can be assumed that some habitats and species at least will continue to decline

Table TP5.8: Issues and Future Baseline

Issue	Likely Future Baseline
Somerset has a number of Special Road Verges which are identified sites within the highways that are of biodiversity interest, usually containing wild flowers of importance, such as orchids	The assumption is that maintenance of these verges will continue and their value will remain the same
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	It is assumed that traffic levels will increase in the future. Without the actions in the Somerset County Council Transport Policies it is assumed that the negative impact of transport on landscape will increase
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	More information is needed on green infrastructure within Somerset before pro-active planning can occur The rights of way network in Somerset is not as easy to use as it could be. Most resources will be targeted at improving the network that exists in the next few years (rather than expanding the network)
Transport can have negative effects on the townscape and heritage of the settlements it passes through	Most roads in Taunton and Bridgwater and Yeovil will experience increases in traffic thus increasing impact on townscape The spatial strategy for Somerset will mean that most development occurs in SSCTs and category B towns. In the absence of the Somerset County Council Transport Policies, effects on townscape caused by traffic in these communities are likely to increase.

7 Suggested SEA Objectives

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

Environment	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Protect and enhance biodiversity at all levels	<ul style="list-style-type: none"> • Cause direct habitat fragmentation / loss especially that would risk achievement of Somerset BAP priority targets? • Cause a change in traffic flows or nature of traffic² that will affect sensitive habitats or focal species?

² 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 (ie. installation of speed humps, changes to road surfaces etc) or anything else that might cause

Environment	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Protect and enhance buildings, sites, areas and features of historic, archaeological and architectural interest	<ul style="list-style-type: none"> • Cause direct impacts on sites or monuments through the provision of new infrastructure? • 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?
Protect and enhance landscape quality and character	<ul style="list-style-type: none"> • 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? <p>(please note that the health topic paper addresses transport and tranquil areas).</p>

increased nuisance and pollution.



Somerset County Council

Somerset County Council
Transport Policies Strategic
Environmental Assessment
Environmental Report

Appendix 1 (Topic Paper 6
Natural Resources)

Prepared for:

**Somerset County Council
Taunton**

Prepared by:



**ENVIRON
Exeter, UK**

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Table of Contents

1	Introduction	1
2	Policy Context	1
2.1	National Transport Goals	2
2.2	Regional Spatial Strategy (RSS)	2
2.3	Sustainable Community Strategy and Local Area Agreement	4
3	The Influence of the Somerset County Council Transport Policies	8
4	Baseline Data	8
4.1	Climate and Energy Data	8
4.2	Water Issues	12
4.3	Other Natural Resources	14
5	Data Sources and Gaps	16
5.1	Data Sources	16
5.2	Data Gaps	17
6	Sustainability Issues	17
7	Suggested SEA Objectives	18

1 Introduction

This is Topic Paper 6 of the SEA Environmental Report of the Somerset County Council Transport Policies (the equivalent of the Local Transport Plan). . The topic paper addresses the potential issues of relevance to the Somerset County Council Transport Policies which are related to the RSS high level sustainability objective of¹:

Minimising consumption of natural resources

There are five other Topic Papers that address:

- Improving health (Topic Paper 1);
- Supporting communities that meet people's needs (Topic Paper 2);
- Developing the economy in ways that meet people's needs (Topic Paper 3);
- Provide access to meet people's needs with least damage to communities and the environment (Topic Paper 4); and
- Maintain and improve environmental quality and assets (Topic Paper 5).

This paper sets out:

- The policy context that the Somerset County Council Transport Policies will need to address;
- The influence that the Somerset County Council Transport Policies 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 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.

¹ 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.

A summary has been included below of the key documents that the Somerset County Council Transport Policies should help to deliver – the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. Table TP6.1 includes reviews of the other important policy documents that will influence the delivery of the Somerset County Council Transport Policies.

I think you also really need to define what is covered by natural resources as the first set of reviews focus on climate change and waste but then soil for example appears in the table. I think it would be helpful to have a sentence here setting the coverage out.

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; and
- Deliver quantified net reductions in greenhouse gas emissions within cities and regional networks taking account of cross network policies.

2.2 Regional Spatial Strategy (RSS)

The latest version of the RSS is the *Draft Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes - for Public Consultation* (July 2008). The RSS includes a number of relevant policies including (the policies have been summarised):

Policy SD2 Climate Change: The region's contribution to climate change will be reduced by reducing greenhouse gas emissions at least in line with the current national targets of 30% by 2026 (compared to 1990 levels), as part of a longer term reduction of 60% by 2050. The region will adapt to the anticipated changes in climate by:

- Managing the impact of future climate change on the environment, economy and society;

- Identifying the most vulnerable communities and ecosystems given current understanding of future climate change and provide measures to mitigate against these effects;
- Avoiding the need for development in flood risk areas and incorporating measures in design and construction to reduce the effects of flooding;
- Recognising and putting in place policies and measures to develop and exploit those opportunities that climate change will bring;
- Requiring 'future proofing' of development activity for its susceptibility to climate change; and
- Improving the resilience and reliability of existing infrastructure to cope with changes in climate and in the light of future demand.

Policy RE6 Water Resources: The region's network of ground, surface and coastal waters and associated ecosystems will be protected and enhanced, taking account of the Environment Agency's 'Regional Water Resources Strategy', catchment abstraction management strategies, groundwater vulnerability maps, groundwater source protection zone maps and river basin management plans. Surface and groundwater pollution risks must be minimised so that environmental quality standards are achieved and where possible exceeded.

Policy W2 Waste Facilities and the Waste Hierarchy: Proposals for the provision of new waste management facilities should accord with the following sequential approach:

- Accommodate the management of waste on the site where it arises, wherever possible (waste minimisation); and then
- In order to minimise the distance waste is transported, particularly by road, waste should be managed as close as practicable to where it arises.

The location of new strategic waste management or disposal facilities should accord with the following sequential approach:

- They should be at SSCTs – within or if that is not practicable;
- On the edge of, or if that is not practicable;
- In close proximity to the urban area primarily served by the facility.

To the extent that such facilities cannot meet the needs of smaller towns and rural areas, there should be provision of a network of local waste management facilities concentrated at, or close to Policy B towns (These are towns which must be defined in each district's Local Development Framework. These are likely to be similar to those identified in the Somerset Structure Plan as towns (these are Frome, Glastonbury, Shepton Mallet, Street, Wells, Bridgwater, Burnham-on-Sea and Highbridge, Chard, Crewkerne, Ilminster, Wincanton, Yeovil, Taunton, Wellington and Minehead).

Identification of sites for the provision of new waste facilities will take account of various factors including opportunities for connection to the rail network.

2.3 Sustainable Community Strategy and Local Area Agreement

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

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

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

- Aim 2: Living Sustainably: The vision for 2026 - everyone is aware of the impact of climate change on the county and of the importance of reducing and managing its effects.
- Relevant challenges highlighted under Aim 2 are:
 - Prepare for and respond to the impact on Somerset of climate change

Relevant targets are:

- Reduce carbon dioxide emissions achieved by local authorities' operations;
- Reduce the amount of carbon dioxide produced per person in Somerset;
- Improve adaptation to climate change; and
- Reduce the amount of waste per household that is not reused, recycled or composted.

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 185: CO₂ reduction from Local Authority operations;
- NI 186: Per capita CO₂ emissions in the Local Authority area;
- NI 188: Adapting to climate change; and
- NI 191: Residual household waste per head.

Table TP6.1: Natural Resources Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
International documents	
<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>The Road to Copenhagen (UK Government Document)(June 2009)</p> <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>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> <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>
National documents	
<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>A Draft Soil Strategy for England (Defra, 2008)</p> <p>Waste Strategy for England (Department for</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 CO₂ in 2020.</p>

Table TP6.1: Natural Resources Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
<p>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>PPG20: Coastal Planning (Department for the Environment, 1992) / Consultation Paper on a new planning policy on Development and coastal change (Defra, 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>PPG20: Consider the effects of development on the attributes of the coast. The policy promotes a strategic risk-based approach to managing future physical changes to the coastline.</p>
Regional documents	
<p>The South West Climate Change Action Plan (Draft v3.5 for stakeholder consultation) (Various Regional Partners, 2007)</p> <p>Renewable Energy Strategy for the South West of England 2003-2010 (Government Office for the South West, 2003)</p> <p>From Rubbish to Resource - The Regional Waste Strategy for the South West 2004 – 2020 Consultation Document (South West Regional Assembly, 2004)</p> <p>Water Resources for the Future – A Strategy for the South West Region (Environment Agency,</p>	<p>South West Climate Change Action Plan: Has the following priorities – reducing transport emissions, promoting low carbon technology and economic opportunities</p> <p>Renewable Energy Strategy for the South West of England: For the South West to generate 11-15% of its energy from renewable electricity by 2010. This target is broken down into county targets in REvision 2010: Empowering the Region – Renewable Energy Targets for the South West (Government Office for the South West and the South West Regional Assembly, 2004). Somerset's target is to produce 359-412 GWh of its electricity from renewable energy by 2010. (equivalent to supplying 89,750-103,000 homes)</p> <p>From Rubbish to Resource: The Waste Strategy aims to ensure that by the year 2020: Over 45% of waste is recycled and reused and less than 20% of waste produced in the region will be landfilled</p> <p>Water Resources for the Future: No relevant objectives or targets</p>

Table TP6.1: Natural Resources Policy Context	
Key documents	Objectives / targets and requirements relevant to the Somerset County Council Transport Policies
2001)	
Local documents	
<p>Responding to Climate Change in Somerset (Somerset County Council, February 2008)</p> <p>Somerset Renewable Energy Strategy (2004)</p> <p>The Somerset Minerals Local Plan 1997-2011 (Somerset County Council, Adopted 2004)</p> <p>Somerset Waste Local Plan (Somerset County Council, 2005)</p> <p>Future Waste Planning In Somerset. Issues and Options Consultation (Somerset County Council, 2007)</p> <p>Somerset's Municipal Waste Management Strategy (Somerset Waste Partnership, 2003)</p>	<p>Responding to Climate Change in Somerset: All Somerset County Council service areas will assess potential impacts and opportunities of climate change on service delivery and prepare appropriate action plans; and Somerset County Council will work to achieve a reduction in carbon emissions from local authority operations of 30% by 2015 relative to baseline emissions of 2008</p> <p>Somerset Renewable Energy Strategy: Support and encourage the installation of 61-81 MW of new renewable electricity generating capacity, utilising a range of renewable energy resources and technologies, in Somerset by 2010</p> <p>Somerset Minerals Local Plan – No relevant objectives or targets. Policy M22: Proposals for mineral development that have significant transport implications shall be accompanied by a Transport Assessment. The Assessment shall demonstrate that appropriate consideration has been given to alternatives to road transport, including rail, as a primary freight transport option</p> <p>Somerset Waste Local Plan – waste strategies should adhere to the principles of regional self sufficiency and the proximity principle to reduce unnecessary transport impacts</p> <p>Municipal Waste Management Strategy: To reduce the amount of Somerset's growth in municipal waste from 3.4% to 1% by 2010; to work towards recycling at least 50% household waste by 2010; to ensure Somerset makes provision for enabling 65% of waste to be recycled by 2020; and to reduce the amount of biodegradable waste going to landfill (no specific target set)</p>

3 The Influence of the Somerset County Council Transport Policies

It is important that the SEA is focused on how the Somerset County Council Transport Policies can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The Somerset County Council Transport Policies can influence natural resources 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;
- Ensure that the transport system can cope with the unavoidable effects of climate change; and
- Minimise the impact of the transport system on water resources, soil and mineral resources.

4 Baseline Data

4.1 Climate and Energy Data

4.1.1 Use of 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, Approximately 9TWh came from renewable sources (1.5%). The target is by 2020 for 10% of all transport energy to come from renewables sources.²

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.

² 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.

There is no data available on how much transport in Somerset uses renewable energy. Somerset County Council is the UK leading member of the Bio Ethanol for Sustainable Transport (BEST) project and is instrumental in the Somerset Biofuel Project in order to reduce greenhouse gas emissions from transport and support the achievement of the UK national target for carbon and greenhouse gas reduction by 2012. However, the future of this project is currently uncertain due to the growing global concerns about the environmental sustainability of biofuel.

4.1.2 CO₂ Emissions Data

The Somerset Energy Profile (Somerset County Council, 2003) provides baseline information detailing energy use and emissions in 2001 in Somerset for all sectors. For the transport sector the information includes carbon dioxide (and other) emissions associated with the use of private cars (freight traffic is not addressed). The transport analysis is based on a model developed by Transport and Travel Research (TTR). The inputs to the model detailed in the report are:

- Estimated number of vehicle-kilometres driven in cars on Somerset roads by road type and fuel type (petrol/diesel)
- Estimated fleet composition figures for cars registered in Somerset, split as follows:
 - Fuel type - petrol/diesel;
 - Engine size; and
 - Engine technology classification i.e. European vehicle standards (I, II, III, IV), pre-Euro standards, alternatively fuelled cars etc

The outputs from the model include total CO₂ emissions in tonnes from cars in Somerset by road type and fuel type. The research indicated that:

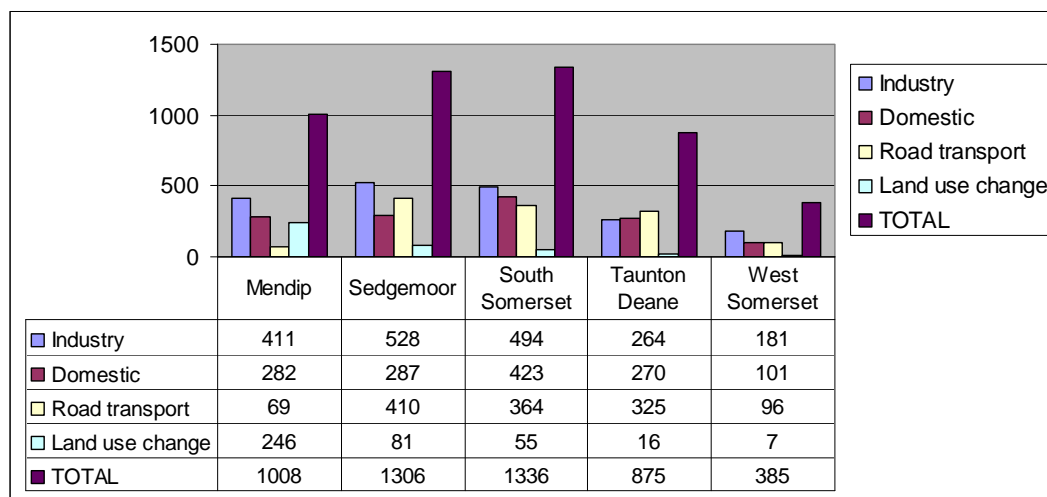
- In Somerset transport accounted for 722,206 tonnes of CO₂ emitted. This equated to 1.449 tonnes per person;
- Somerset's car fleet is older and larger than the national average, which reflects lower income levels in rural areas and the use of larger cars for longer distance travel in rural areas. This fleet composition will tend to produce higher vehicle emissions than the national average;
- The rural nature of Somerset means that the car is an efficient transport solution for many rural communities. The majority of traffic is due to local car use on main rural roads and minor urban roads, although there is a significant amount of traffic on the county's motorways; and
- The overall fleet in Somerset consists in general of larger engine sizes for petrol cars and similar size engines for diesel to the national average.

No figures are given in the report that can be used to compare Somerset to other areas or compare transport emissions to other sectors.

Statistics from Defra (2006) show that road transport's share of the South West's CO₂ emissions in 2006 was 28% (in 2006). Figure TP6.1 shows the source of CO₂ emissions in each of the Somerset Districts. 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.

Figure TP6.1: Emissions in the Somerset Districts



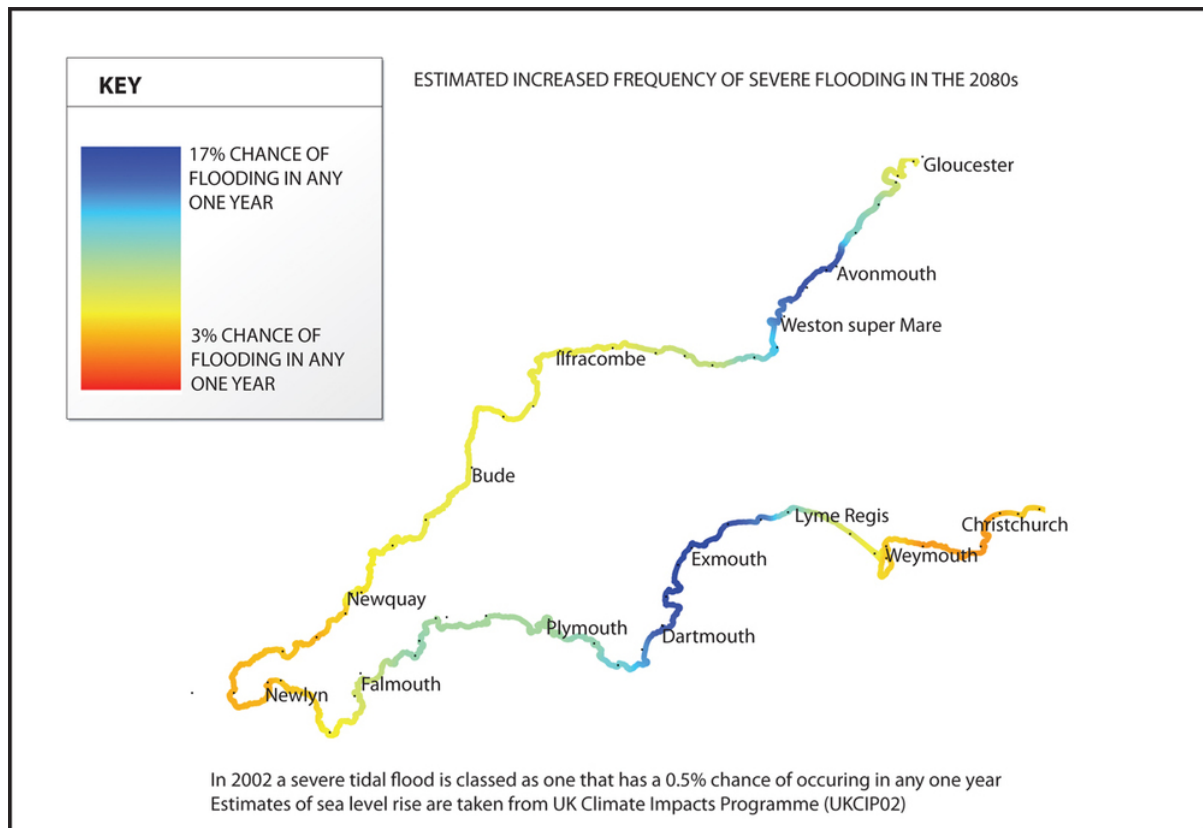
(Source: <http://www.defra.gov.uk/environment/statistics/globalatmos/galocalghg.htm>.)

Work is ongoing at the regional level (through the South West Region Transport Technical Group Climate Change sub-group) to update these emissions predictions. They are currently working on a project entitled “Climate Change: Development of Assessment Framework & Critique of Existing Methodologies”. Any further work will be reported through the SEA as it progresses.

4.1.3 Climate Change Adaptation

The report, “Warming to the idea....Meeting the challenge of climate change in the South West” (January 2003) summarises 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:

- The region is becoming warmer and by the 2050s average temperatures may be as much as 3.50C warmer in summer;
- High summer temperatures are becoming more frequent, and very cold winters are becoming increasingly rare;
- Winters are becoming wetter (a 5 - 20% increase in rainfall is expected by the 2050s), whilst summers are becoming drier (10 - 40% decrease in rainfall is expected by the 2050s); and
- Relative sea level continues to rise, and could be as much as 76 cm higher by the 2080s (see Figure TP6.2).

Figure TP6.2: Areas at risk of coastal inundation

(Source: South West Regional Spatial Strategy)

Some of the more specific impacts of climate change on transport system include.

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). Larger

extremes of temperature will also have an impact

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; Developing a Transport Strategy for Climate Change Adaptation (Sustainable Development Research Network, 2008) The Changing Climate: Impact on the Department for Transport (2005))

Somerset County Council has recently completed a document entitled “Responding to Climate Change in Somerset” (Somerset County Council, February 2008) and this sets out the commitment that all County Council service areas will assess potential impacts and opportunities of climate change on services delivery and prepare appropriate action plans. This strategy is the first step in engagement and future adaptation strategies will need to be developed to prepare for the changes to come.

In terms of flooding much of Somerset is low-lying and therefore at risk from flooding. The Parret Catchment which covers half the County (1,690 sq.km) and includes the tributaries of the Tone, Yeo, Cary and Isle is particularly vulnerable to flooding with the lower part of the Catchment subject to regular flooding. In terms of specific action related to flooding and the transport system the Highway Schemes Proposal Register (HSPR) mapping system enables Somerset County Council to co-ordinate all schemes and works and ensure compliance with planning and environmental legislation through interrogation of environmental data sets. A layer of known flood sites is being developed and appropriate levels of maintenance at these sites has been allocated to ensure resilience of the network against flooding is maintained. Examples include proactive drain cleansing and temporary car parking restrictions to ensure that gullies are emptied. Outputs from this mapping system (once completed) will be included in the SEA Report.

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. Somerset County Council is currently planning how it will adhere to these regulations.

4.2 Water Issues

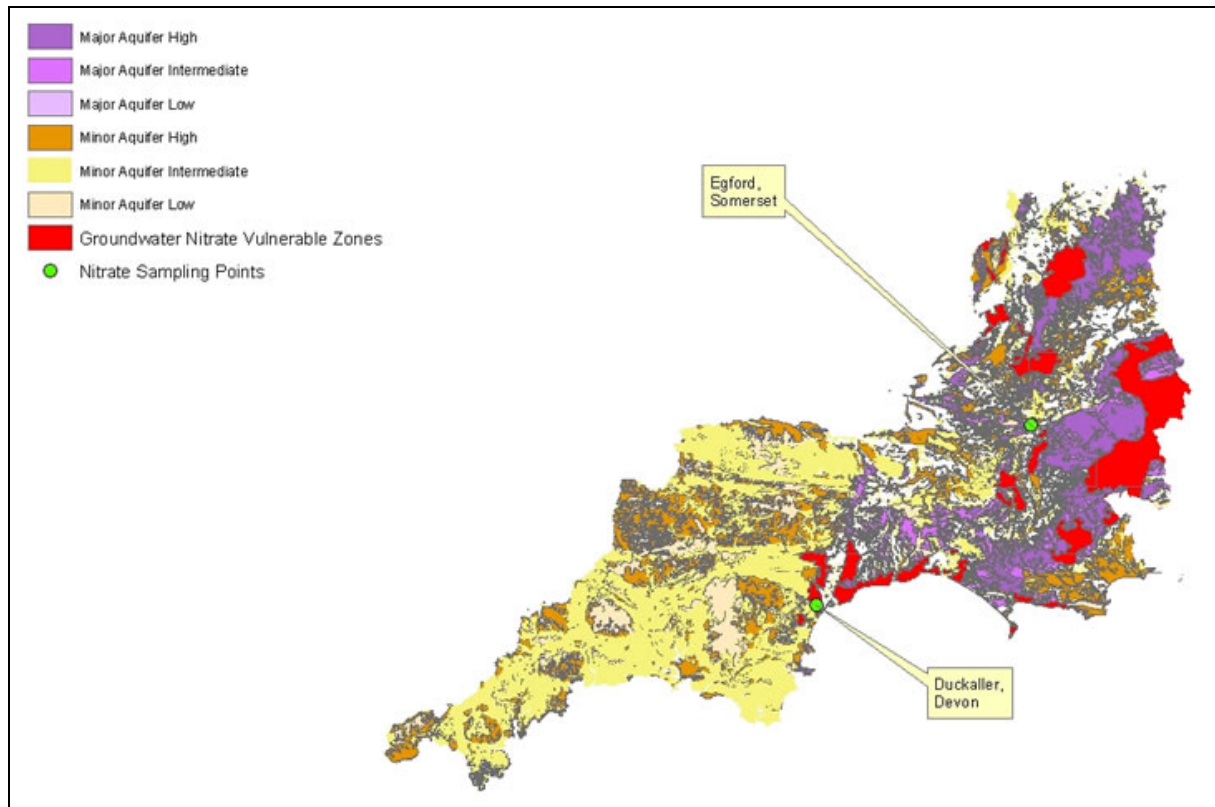
See above for information on flooding and see Topic Paper 5 for effects of transport systems on rivers and other freshwater habitats.

4.2.1 Groundwater Vulnerability

Groundwater is measured by a vast network of boreholes that covers the South West. Maps have been produced for the whole of England and Wales showing the vulnerability of

groundwater to pollution. These maps do not consider the risk of pollution occurring, but how easily pollutants can move through the water table. This map is shown as Figure TP6.3 (www.senvo.org.uk).

Figure TP6.3: Aquifers



In terms of groundwater quality, the Wessex Water, Water Resources Management Plan (2008) lists groundwater quality as a key issue. The report states that 75% of the water abstracted in the Wessex Water area comes from groundwater and generally this water is of very good quality requiring little treatment other than chlorination before being suitable for supply to customers. However, over recent years at many sites Wessex Water have noticed deterioration in the quality of that water, especially in the levels of nitrate (which can come from road de-icing) but also pesticides.

4.2.2 Water Consumption and Efficiency

Figures from OFWAT (on the Audit Commission Area Profiles website) suggest that the daily domestic water use (per capita consumption) for Somerset is 151 litres. There are no data previous to 2004 so no trend data are available. This compares to an average consumption of 150 litres per head per day across England and Wales. The Government's ambition is to reduce average consumption to 130 litres per head per day by 2030, or to as low as 120 litres per head per day depending on technological development and innovation (Defra, Future Water 2008). Wessex Water figures suggest that metered households use less water (at 136 litres per person per day) (Wessex Water, Water Resource Management Plan (2008)). The Wessex Water, Water Resource Management Plan also makes predictions about future water use. The report states that taking all the component parts of water used in the home and how they are likely to change in the future, an overall per capita

consumption forecast can be derived for un-metered and metered households. In a normal year the water used by each person in an un-metered household is expected to remain broadly stable at approximately 151 litres per person per day over the coming decade, after which demand will decrease to approximately 144 litres per person per day. For metered households, average water consumption per person is forecast to modestly decline from approximately 137 to 135 litres per person per day.

4.3 Other Natural Resources

Please note that ecology, landscape and heritage matters are addressed in Topic Paper 5 and air quality and noise matters in Topic Paper 1.

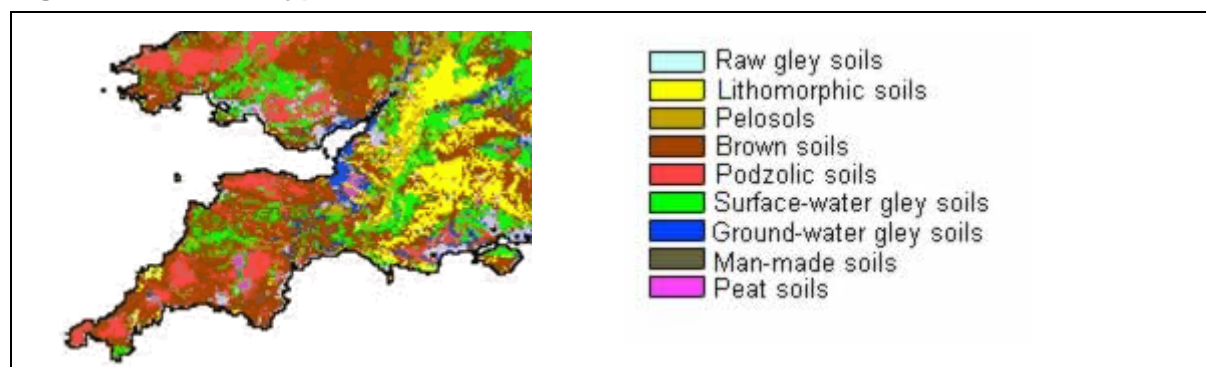
4.3.1 Soil and Geological Data

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.

There are nine major soil types in England and Wales as mapped below by the National Soil Resources Institute. The South West Region contains a wide variety of soils associated with its diverse range of landscapes. Figure TP6.4 shows the main distribution of soils in the South West.

Figure TP6.4: Soil Types in the South West



(Source: www.swenvo.org.uk)

4.3.2 Use of Recycled Aggregates

In Somerset 100% of road planings are recycled (excluding those contaminated by tar which are disposed of to a special waste facility). In 2008-2009 12,223m³ (approx 27,000 tonnes) of planings were recycled. Planings are recycled by the following methods:

- On the highway by making up/stiffening verges to aid drainage and define driving lines keeping vehicles on the road surface;
- On site recycling to produce new base-course material;
- Stock feed to quarries for use in the production of new road construction materials;
- Through recycling centres where the planings may be used for a variety of construction projects; and
- In addition to road planings other materials such as concrete kerbs and paving slabs are either reused or sent to a recycling plant for crushing and recycling elsewhere.

4.3.3 Waste and Minerals Strategy

Somerset Minerals Local Plan 1997-2001 outlines the mineral strategy for Somerset and the waste strategy is outlined in the Waste Local Plan 2001 – 2011.

Minerals development in Somerset is mainly concentrated in two areas, aggregate quarrying in the Mendip Hills and Peat extraction in the Somerset Levels and Moors. The majority of minerals are transported by road. However, a significant proportion of aggregate travels by train from the railheads located at Torr Works and Whatley quarries (in the Mendip Hills).

A study has been undertaken on the impact of the traffic generated by the local peat and quarry industries on the unique environment of the Levels and Moors (Somerset Levels HGV Management Study Draft report (Somerset County Council, date unknown)). This study found that historical construction of the highways on to the peat substrate has resulted in road subsidence, poor road surface and riding qualities. HGV movements have also had negative effects on the local community including accessibility problems and traffic congestion leading to a magnified negative perception of HGV movements in the area. The study recommends mitigating the impacts of HGV movements on the local community while recognising that the peat industry has an important role to play on the economy of the Levels.

The Somerset Minerals and Waste Development Framework Annual Monitoring Report 2006/07 highlighted that in that reporting period no transport related complaints had been made in relation to existing minerals sites. This does not mean that transport by HGVs does not cause problems.

In terms of waste management, at present, all waste in Somerset is transported to management facilities by road (Somerset Minerals and Waste Development Framework Annual Monitoring Report 2006/07) and this clearly has impacts upon those using the highway network and those living close to it. Other methods, such as rail and water transport are not likely to feature in the immediate future but may have potential in the longer term.

At the moment the majority of Somerset's waste is still disposed of at landfill sites and there are a number of these sites spread throughout Somerset. The Somerset Minerals and Waste Development Framework Annual Monitoring Report 2006/07 identifies that the distance waste is travelling is increasing as landfills are becoming full and waste is being transported to the next nearest facility. It is also likely that other waste management methods will become more significant in the future and methods of energy and materials recovery will become more important. Many modern waste management facilities rely on a large throughput of waste based on large numbers of HGV movements. The RSS specifies that strategic waste management facilities should be located in or near to Strategically Significant Towns and Cities (SSTCs) (in Somerset's case this means Bridgwater, Taunton and Yeovil). While there can be significant advantages gained by locating new waste management facilities as close as possible to where the waste arises (the proximity principle) and in areas with good accessibility this may have impacts on already congested networks in SSTCs.

5 Data Sources and Gaps

5.1 Data Sources

- Warming to the idea....Meeting the challenge of climate change in the South West (January 2003);
- The UK Renewable Energy Strategy (2009);
- Somerset Energy Profile (Somerset County Council, 2003);
- Responding to Climate Change in Somerset (Somerset County Council, February 2008)
- Defra e-Digest Statistics about: Climate Change
<http://www.defra.gov.uk/environment/statistics/globalatmos/globalghg.htm>;
- Low Carbon Transport: A Greener Future (DfT, 2009);
- Future Water (Defra, 2008);
- Developing a Transport Strategy for Climate Change Adaptation (2008);
- The Changing Climate: Impact on the Department for Transport (2005);
- Somerset LTP2 Annual Progress Report 2 (Somerset County Council, November 2008);
- 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;
- The State of Soils in England and Wales (Environment Agency, 2004);
- Somerset Minerals Local Plan 1992 – 2011 (Adopted 2004);
- Somerset County Council Somerset Levels HGV Management Study Draft report (date unknown); and
- Somerset Minerals and Waste Development Framework Annual Monitoring Report 2006/07.

5.2 Data Gaps

- Information on use of renewable energy in the transport system in Somerset; and
- The future of the Somerset bio-fuel project;
- Up to date CO₂ emission data.

6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown in Table TP 6.2. These issues will be used to guide the selection of the SA Objectives that the plan will be assessed against.

Table TP6.2: Issues and Future Baseline	
Issue	Likely Future Baseline
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	In the absence of measures bought forward as part of the Somerset County Council Transport Policies the target is unlikely to be met.
Somerset's cars emit more CO ₂ 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 CO ₂ 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.	According to the Taunton Transport Study CO ₂ levels are forecast to increase by 42% in the study area in the future baseline scenario CO ₂ 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.
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
Water consumption per head is higher in Somerset than in the UK as a whole. This is an important issue in terms of maintenance	Over the coming decade water use per capita is expected to remain broadly stable. It will remain important that water used for highway maintenance is as sustainable as possible. This means reducing the amount that is used and re-using water where possible.
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	In the absence of measures in the Somerset County Council Transport Policies and with flooding from highway drains becoming more common under climate change scenarios this issues is likely to get worse
Use of recycled aggregates – Somerset re-uses a high proportion of road planings and this should continue; and	The use of recycled road planings is likely to remain high.

Table TP6.2: Issues and Future Baseline

Issue	Likely Future Baseline
Transport of minerals and waste by road can cause problems to local communities	<p>Transport of minerals is likely to remain mainly by HGV and the routes currently affected are likely to remain the same.</p> <p>The future growth strategy will mean that more strategic waste management facilities will be focused on the SSCTs. While there can be significant advantages gained by locating new waste management facilities as close as possible to where the waste arises (the proximity principle) and in areas with good accessibility this may have impacts on already congested networks in SSTCs. However, the proximity principle will reduce the amount of CO₂ caused by this movement.</p>

7 Suggested SEA Objectives

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

Natural Resources	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
Reduce the contribution of the transport system to carbon emissions	<ul style="list-style-type: none"> • Cause a change in vehicle miles or a change in the nature³ of traffic that would cause changes in fuel use and CO₂ 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: CO₂ 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)
Ensure that the transport system can cope with the unavoidable effects of climate change	<ul style="list-style-type: none"> • Reduce the unavoidable effects of climate change (link to LAA indicator NI 188: Adapting to climate change)
Minimise the impact of the transport system on water resources, soil and mineral resources	<ul style="list-style-type: none"> • 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?

³ 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.

Natural Resources	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies...	Somerset County Council Transport Policies SEA indicator. Will the Transport Policies...
	<ul style="list-style-type: none"> • 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?