

Appendix 1 Maps of environmental baseline

Figure A1.1 National environmental designations

Map 1: National Environmental Designations

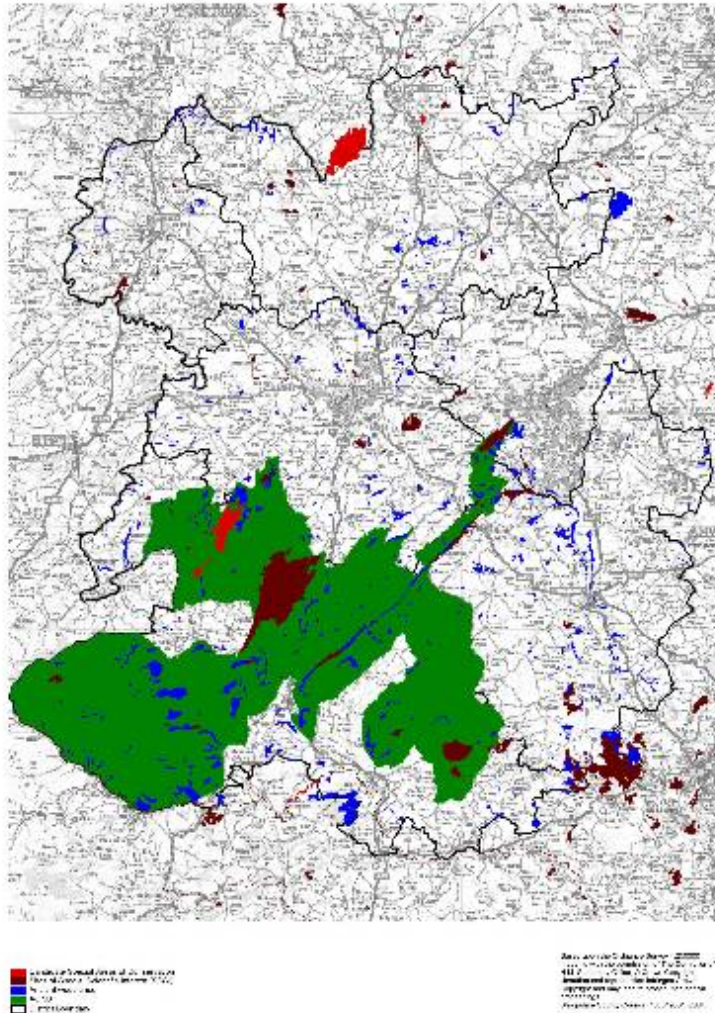


Figure A1.2 Local environmental designations

Map 2: Local Environmental Designations

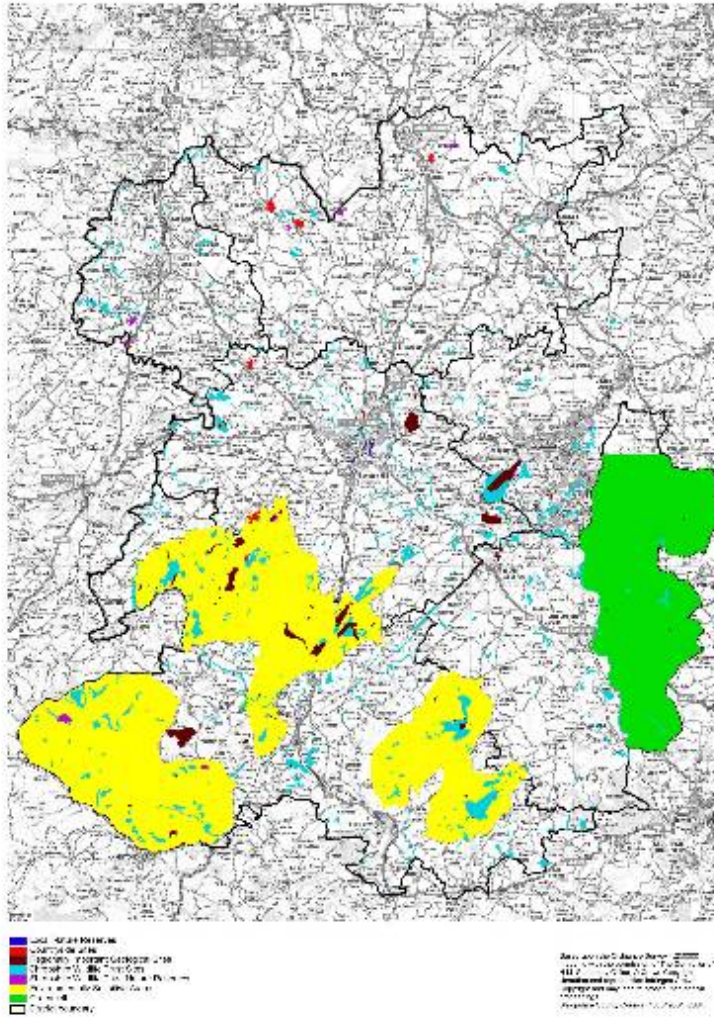
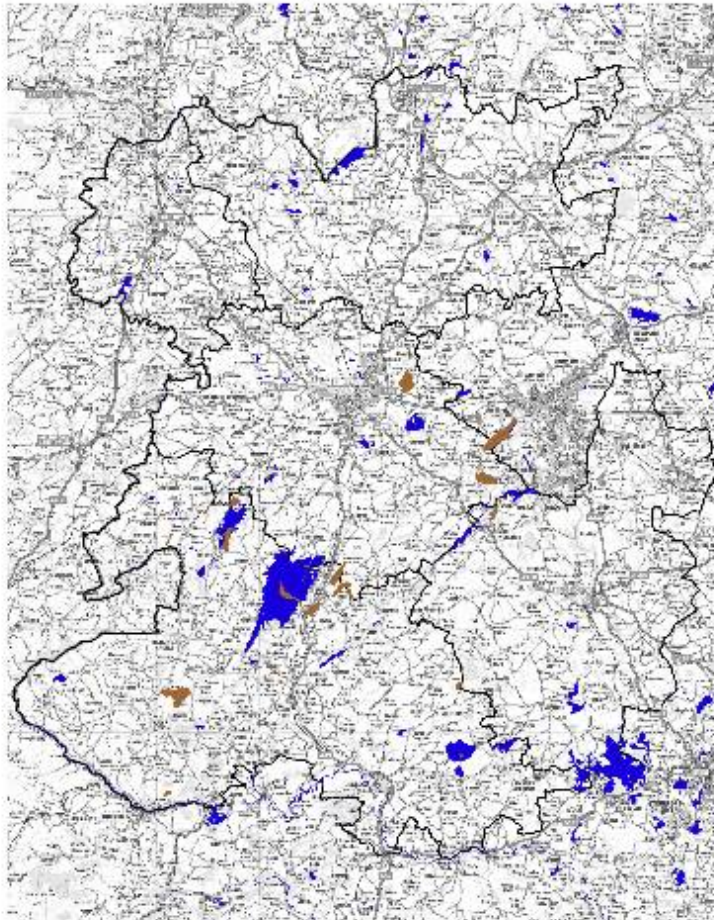


Figure A1.3 Shropshire geological areas

Map 3: Shropshire Geological Areas



Legend:
Orange: [Symbol] [Text]
Blue: [Symbol] [Text]
Black: [Symbol] [Text]

Scale: 1:50,000
[Symbol] [Text]
[Symbol] [Text]
[Symbol] [Text]
[Symbol] [Text]

Figure A1.4 Shropshire heritage and townscape

Map 4: Cultural Heritage and Townscape

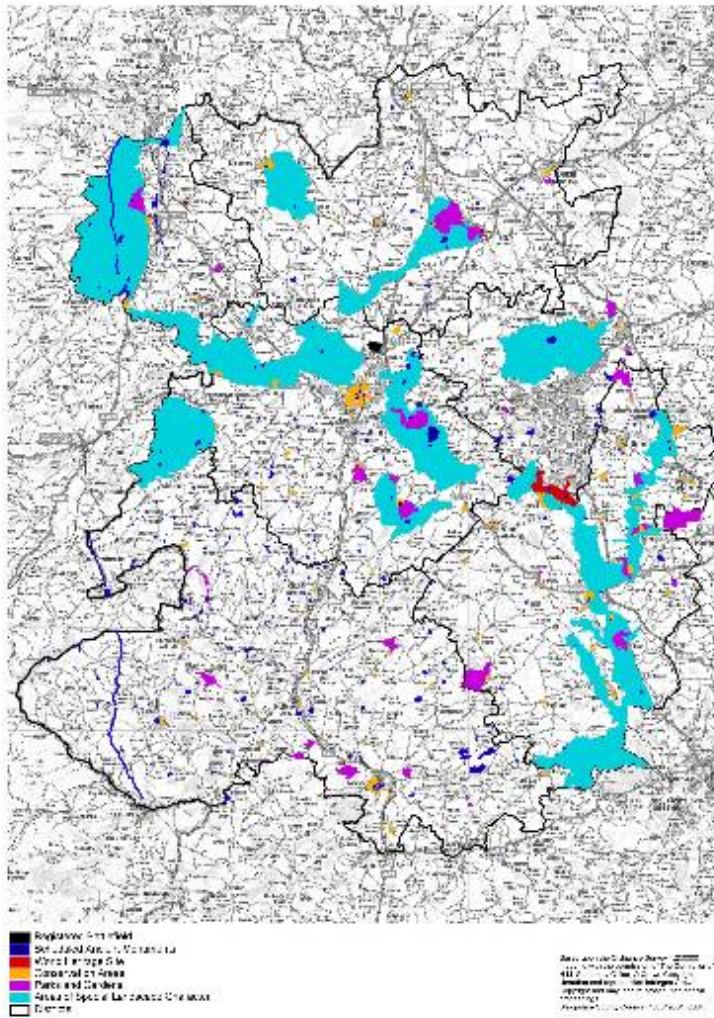


Figure A1.5 Environmentally sensitive areas

Map 5: Environmentally Sensitive Areas

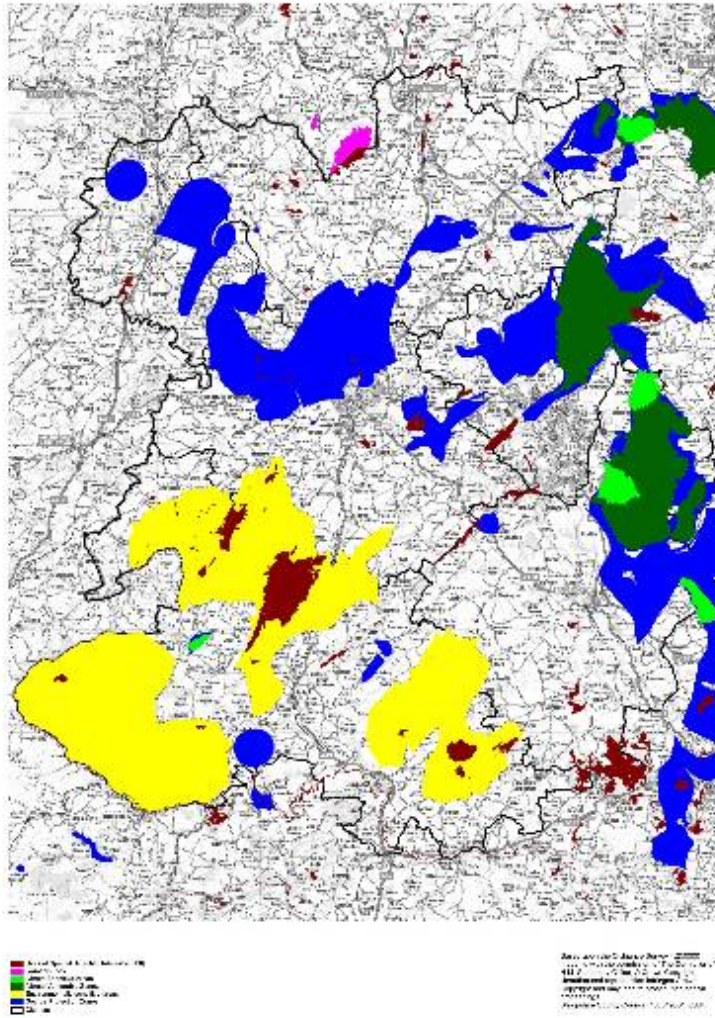


Figure A1.6 Flood zones in Shropshire

Map 6: Flood Zones in Shropshire

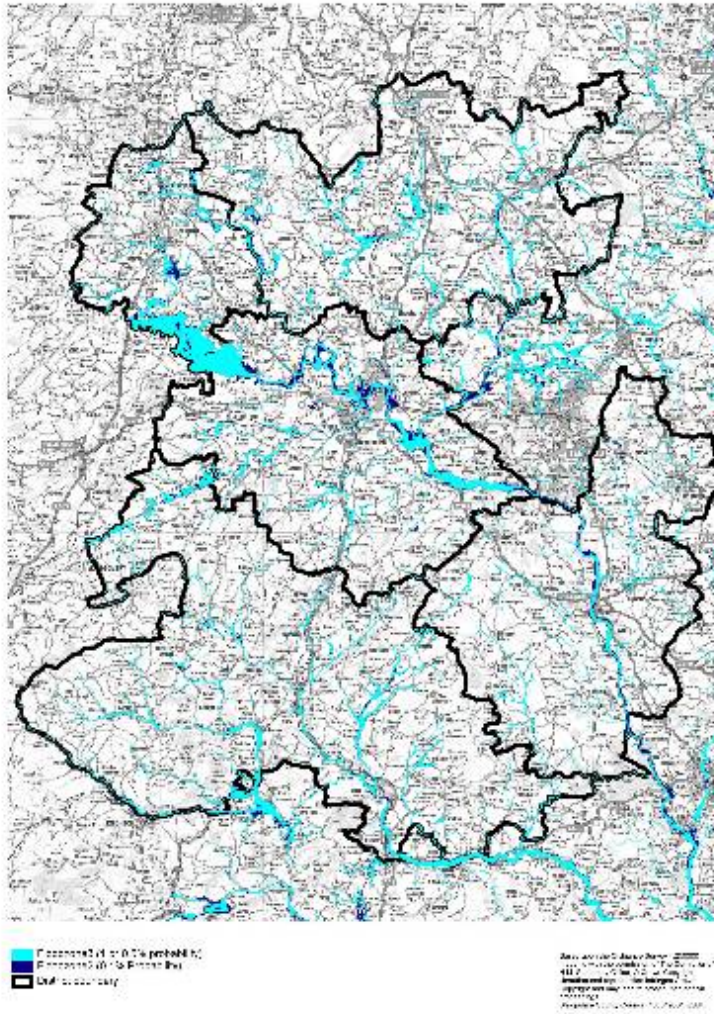


Figure A1.7 Outdoors living environmental deprivation index

Map 7: 'Outdoors' Living Environment Deprivation Index

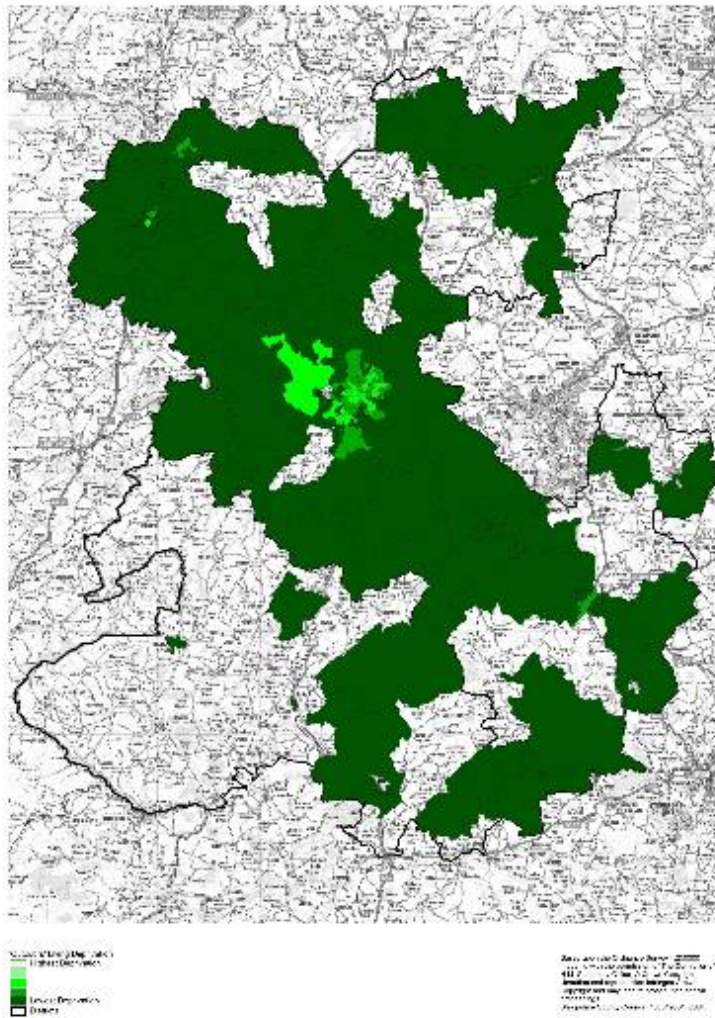


Figure A1.8 Health deprivation domain

Map 8 Health Deprivation

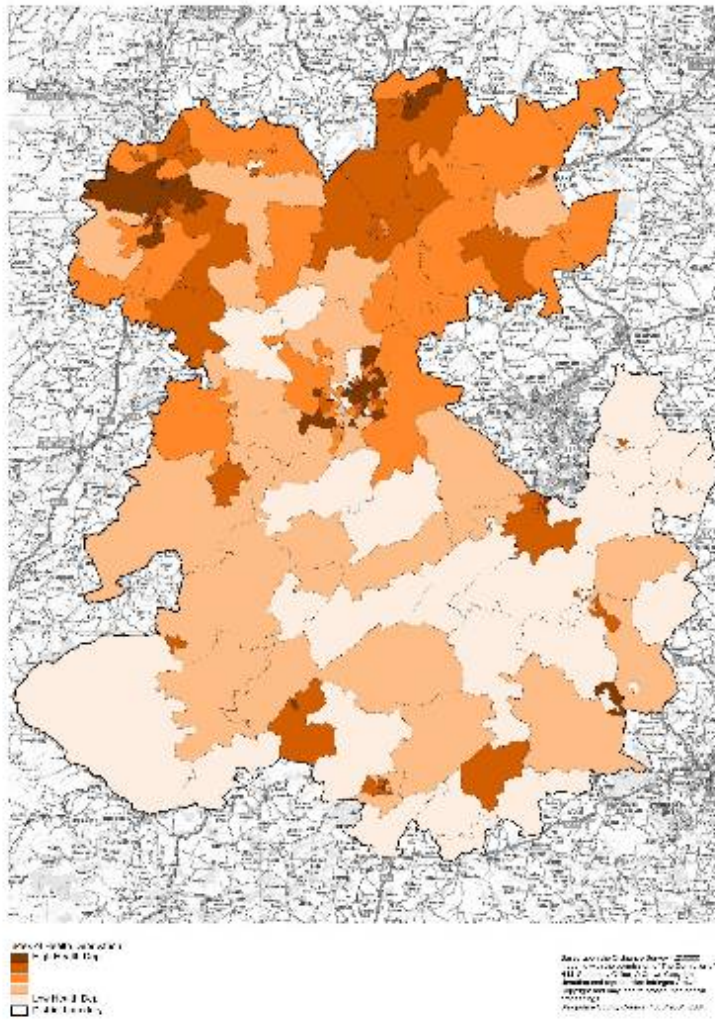


Figure A1.9 Indoors living environment deprivation domain

Map 9: 'Indoors' Living Environment Deprivation Domain

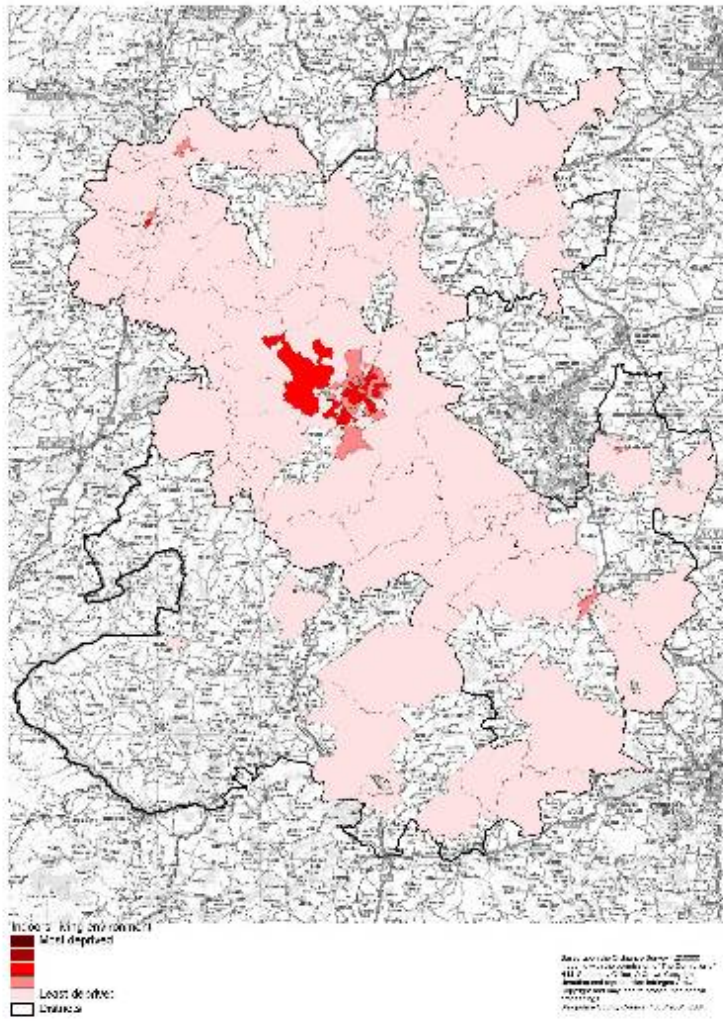
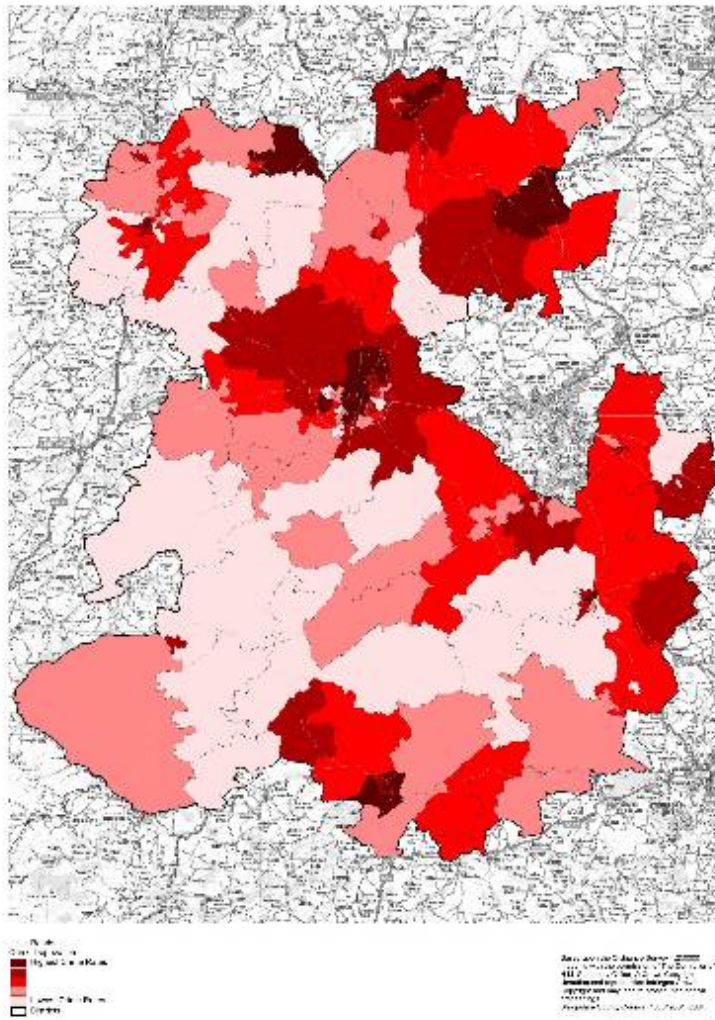


Figure A1.10 Levels of crime

Map 10: Levels of Crime



Appendix 2 Details of strategic options

Table A2.1 Details of the measures included within each strategic LTP option

Draft LTP objective	Option 1 - Emphasis on equality and safety (public consultation priorities)	Option 2 – Emphasis on safety and health, equality, economic growth and carbon (Government priorities)	Option 3 – Based around the priorities of: Safety and health, equality, economic growth and carbon and quality of life
Carbon reduction and environment		<p>Involvement in land use planning process - input into local development frameworks</p> <p>Consideration of demand management measures</p> <p>Promote cleaner fuels and vehicles</p> <p>Further development of park and ride</p>	<p>Involvement in land use planning process - input into local development frameworks</p> <p>Consideration of demand management measures</p> <p>Promote cleaner fuels and vehicles</p> <p>Further development of park and ride</p> <p>Addressing edge of town car dependant development</p> <p>Continued improvements to key bus routes to encourage modal shift</p> <p>Encourage greater integration of bus and rail services</p> <p>Improvements and encouragement for cyclists and pedestrians particularly for local journeys</p> <p>Appropriate HGV routing through encouragement and restrictions</p> <p>Review highway maintenance practices</p>
Healthy, safe and confident people and communities	<p>Highway maintenance</p> <p>Targeted road safety training, education and publicity</p> <p>Speed enforcement through speed camera partnership</p>	<p>Highway maintenance</p> <p>Targeted road safety training, education and publicity</p> <p>Speed enforcement through speed camera partnership</p>	<p>Highway maintenance</p> <p>Targeted road safety training, education and publicity</p> <p>Speed enforcement through speed camera partnership</p>

	<p>Local safety schemes</p> <p>Emphasis on demand responsive transport</p> <p>Targeted footway and cycle route improvement</p> <p>Mobility improvements</p> <p>Help implement Countryside Access Strategy</p> <p>Encourage accessibility considerations in land use planning decisions</p>	<p>Local safety schemes</p> <p>Emphasis on demand responsive transport</p> <p>Targeted footway and cycle route improvement</p> <p>Mobility improvements</p> <p>Help implement Countryside Access Strategy</p> <p>Encourage accessibility considerations in land use planning decisions</p>	<p>Local safety schemes</p> <p>Emphasis on demand responsive transport</p> <p>Targeted footway and cycle route improvement</p> <p>Mobility improvements</p> <p>Help implement Countryside Access Strategy</p> <p>Encourage accessibility considerations in land use planning decisions</p> <p>Village and town speed limit schemes</p> <p>Rural footway schemes</p> <p>More pedestrian crossing facilities</p> <p>Promotion of active travel - targeted marketing</p> <p>School travel plans and safer routes to school</p>
Economy and growth	<p>New roads & sustainable transport infrastructure to serve new developments - as part of development process</p> <p>Support for TEN road and rail routes</p> <p>Greater integration in planning and provision of public transport services</p>	<p>New roads & sustainable transport infrastructure to serve new developments - as part of development process</p> <p>Support for TEN road and rail routes</p> <p>Greater integration in planning and provision of public transport services</p> <p>Demand management and traffic management measures to reduce congestion/ improve access in market towns</p>	<p>New roads & sustainable transport infrastructure to serve new developments - as part of development process</p> <p>Support for TEN road and rail routes</p> <p>Greater integration in planning and provision of public transport services</p> <p>Demand management and traffic management measures to reduce congestion/ improve access in market towns</p> <p>Lobby for better rail services</p> <p>Town centre enhancement work to support market town initiatives</p> <p>Support development of</p>

			employee travel plans Freight routing schemes Brown sign and tourism facilities review Seek public transport improvements beneficial for businesses e.g. improved London rail links
--	--	--	--

Appendix 3 Detailed assessment of environmental effects of strategic alternatives

The table set out below summarises the prediction and assessment of the significant effects on the environment of each of the three strategic LTP options. The impacts are set out in relation to each sustainability topic area. The relevant objective for each topic areas is shown in table 2.1 in the main Sustainability Appraisal document.

Local air quality

Option 1 - Safety and equality

Sustainability topic	Local air quality	Likely evolution of baseline without plan	Slightly beneficial	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>No demand management measures or local promotion of cleaner fuels.</p> <p>Road improvements undertaken for safety/accessibility</p> <p>Traffic and congestion levels will rise faster with no LTP.</p> <p>Predicted baseline evolution of improving air quality would not occur.</p>	<p>Poor air quality likely to impact negatively on human health and historic townscapes</p> <p>In rural areas poor air quality may impact on biodiversity</p>	<p>Impact of air quality is local.</p> <p>Will particularly effect urban areas with high populations, including historic town centres, with listed buildings</p> <p>Air quality may also become worse in rural areas due to road improvements</p>	<p>Primary effects are reversible</p> <p>Secondary impacts on human health and biodiversity not reversible</p> <p>High level of certainty</p>	<p>Reduce number of receptors, or improve insulation in areas of poor air quality</p>
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
N/A	0	0	0	Neutral

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Local air quality	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Some local demand management measures and promotion of cleaner fuels. Prevent further increases in traffic in AQMA's and reduce the most polluting vehicles. Will lead to improvements in air quality in AQMA's	Improved air quality, positive impact on human health and historic townscapes	Impact of air quality is local. Will particularly effect urban areas with high populations, including historic town centres, with listed buildings	Effects are likely to be reversible High level of certainty	N/A
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
N/A	+	++	++	Moderately beneficial

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Local air quality	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Some local traffic and demand management measures in urban areas. Promotion of cleaner fuels and development of sustainable transport alternatives across wider areas. In short term prevent further increases in traffic in AQMA's and reduce the most polluting vehicles. Will lead to improvements in air quality in AQMA	Improved air quality positive impact on human health and historic townscapes	Impact of air quality is local. Will particularly effect urban areas, including historic town centres, with listed buildings	Effects are likely to be reversible High level of certainty	N/A

In medium term the impact of alternative fuels and provision of sustainable alternatives will have positive impact over wider areas preventing declaration of further AQMA's				
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
N/A	+	++	++	Moderately beneficial

Carbon emissions

Option 1 - Safety and equality

Sustainability topic	Carbon emissions	Likely evolution of baseline without plan	Moderately adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary	Description of possible mitigation
No demand management measures. Localised road improvements undertaken for safety/accessibility Nothing to tackle traffic growth trend and where local improvements made attract additional traffic. Increase in greenhouse gases from road transport	Effects from Shropshire will add to cumulative effects of other areas of UK and rest of world Climate change likely to impact on biodiversity and likelihood of flooding Impacts of climate change likely to be felt in the longer term	Impact is global Areas susceptible to flooding are important areas for human housing and biodiversity	Effects likely to happen in the longer term and be permanent Low level of certainty	Ensure infrastructure development is not in areas at risk of flooding Consider carbon sequestration measures e.g tree planting to balance emissions from traffic growth
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available at present	--	--	---	Strongly adverse

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Carbon emissions	Likely evolution of baseline without plan	Moderately adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Some local demand management measures. In urban areas, but across county safety and accessibility improvements likely to increase vehicle km growth above baseline evolution. Increase in greenhouse gases from road transport	Effects from Shropshire will add to cumulative effects of other areas of UK and rest of world Climate change likely to impact on biodiversity and likelihood of flooding Impacts of climate change likely to be felt in the longer term	Impact is global Areas susceptible to flooding are important areas for human housing and biodiversity	Effects likely to be permanent Low level of certainty	Ensure infrastructure development is not in areas at risk of flooding Consider carbon sequestration measures e.g. tree planting to balance emissions from traffic growth
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available at present	--	--	---	Strongly adverse

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Carbon emissions	Likely evolution of baseline without plan	Moderately adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Some local traffic and demand management measures in urban areas. Development of sustainable transport alternatives across wider areas. Some reduction in	Effects from Shropshire will add to cumulative effects of other areas of UK and rest of world Climate change likely to impact on	Will particularly effect urban areas, including historic town centres, with listed buildings	Effects are likely to be reversible High level of certainty	Ensure infrastructure development is not in areas at risk of flooding Consider carbon sequestration measures e.g tree

demand to travel and shift to more sustainable transport modes reducing overall growth in traffic levels. Growth in greenhouse gases from road transport slower than baseline evolution	biodiversity and likelihood of flooding Impacts of climate change likely to be felt in the longer term			planting to balance emissions from traffic growth
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available at present	+	+	+	Slightly adverse

Landscape (visual and cultural impacts)

Option 1 - Safety and equality

Sustainability topic	Landscape	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Road safety schemes including red road markings, traffic signs and street lighting and accessibility improvements such as crossings and footpaths likely to be unsympathetic to landscape. Increased levels of traffic, HGV's and parked cars in rural areas with no measures to reduce intrusion of landscapes will have negative impacts		Impact on landscape is local Will include impacts on sensitive Shropshire Hills AONB	Effects likely to be reversible High level of certainty	Option 3
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	Moderately adverse

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Landscape	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Road safety schemes including red road markings, traffic signs and street lighting and accessibility improvements such as crossings and footpaths likely to be unsympathetic to landscape. Increased levels of traffic, HGV's and parked cars in rural areas with no measures to reduce intrusion of landscapes will have negative impacts		Impact on landscape is local Will include impacts on sensitive Shropshire Hills AONB	Effects likely to be reversible High level of certainty	Option 3
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	Moderately adverse

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Landscape	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Road safety schemes and other infrastructure schemes will be undertaken in way sympathetic to local landscape character. Schemes to reduce signage clutter and other existing landscape intrusions		Impact on landscape is local Positive impacts on sensitive Shropshire Hills AONB	Effects likely to be reversible High level of certainty	N/A

Reduce levels of growth in traffic in rural areas. Manage routing of HGV's to encourage avoidance of high quality landscape character areas.				
Provision of some screened car parking in high demand rural areas to reduce visual intrusion				
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	++	++	++	Moderately beneficial

Townscape and heritage

Option 1 - Safety and equality

Sustainability topic	Townscape & heritage	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Road safety schemes including red road markings, traffic signs and street lighting and accessibility improvements such as crossings and footpaths likely to be unsympathetic to townscape and heritage. Increased levels of traffic, HGV's and parked cars in urban and rural areas with no measures to reduce visual intrusion and vibration impacts on historic buildings, will have negative impacts		Impact on townscape and heritage is local Will include impacts on listed buildings, conservation areas and scheduled monuments May impact on other historic buildings/areas	Some effects on buildings will be irreversible Moderate level of certainty	As per used in option 3
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	Moderately adverse

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Townscape & heritage	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Road safety schemes including red road markings, traffic signs and street lighting and accessibility improvements such as crossings and footpaths, and some measures to address congestion and air quality (e.g. variable message signs) likely to be unsympathetic to townscape and heritage. No further increase in levels of traffic in urban areas will prevent further impacts on townscapes Increased levels of traffic, HGV's and parked cars in rural areas with no measures to reduce visual intrusion and vibration impacts on historic buildings, will have negative impacts		Impact on townscape and heritage is local Will include impacts on listed buildings, conservation areas and scheduled monuments May impact on other historic buildings/areas	Some effects on buildings will be irreversible Moderate level of certainty	As per used in option 3
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	0	0	0	Neutral

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Townscape & heritage	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
Road safety schemes and other		Impact on	Some effects on	N/A

<p>infrastructure schemes will be undertaken in way sympathetic to local townscape and heritage.</p> <p>Schemes to reduce signage clutter and other existing landscape intrusions</p> <p>Town centre environmental enhancements schemes will improve the setting for historic buildings</p> <p>No further increase in levels of traffic in urban areas will prevent further impacts on townscapes</p> <p>Reduce levels of growth in traffic in rural areas. Manage routing of HGV's to encourage avoidance of heritage areas.</p>		<p>townscape and heritage is local</p> <p>Will include impacts on listed buildings, conservation areas and scheduled monuments</p> <p>May impact on other historic buildings/areas</p>	<p>buildings will be irreversible</p> <p>Moderate level of certainty</p>	
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	++	++	++	Moderately beneficial

Biodiversity (flora and fauna), Soil & geology

Option 1 - Safety and equality

Sustainability topic	<p>Biodiversity (flora and fauna)</p> <p>Soil & geology</p>	Likely evolution of baseline without plan	<p>Biodiversity (flora and fauna): slightly adverse</p> <p>Soil & geology: neutral</p>	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>A focus on only road safety and accessibility improvements is likely to result in road improvement schemes and increasing levels of traffic.</p> <p>This is likely to increase</p>	<p>Improved air quality, positive impact. A reduction in air quality, water quality, noise, light emission</p>	<p>Impacts mostly in rural areas and most significantly where road enhancements or</p>	<p>Impacts on biodiversity may irreversible dependant upon scale of change.</p>	Option 3

<ul style="list-style-type: none"> • habitat loss degradation and fragmentation; • severance and wildlife road kills • disturbance due to increase noise and light pollution • run-off and pollution of water and soil which can reduce biodiversity <p>Verge and hedge maintenance with only road safety in mind is unlikely to result in practices most compatible with enhancing biodiversity</p>	<p>and dust deposition are likely to have secondary negative effects on biodiversity</p> <p>Increased habitat fragmentation will restrict the ability of species to adapt to climate change through migration.</p>	<p>improvements are undertaken near to NNR, SSSI's or other wildlife sites.</p> <p>Greatest impact will be where such sites are already in a vulnerable state</p>	High level of certainty	
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	<p>Biodiversity (flora and fauna): moderately adverse</p> <p>Soil & geology: neutral</p>

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Biodiversity (flora and fauna) Soil & geology	Likely evolution of baseline without plan	Biodiversity (flora and fauna): slightly adverse Soil & geology: neutral	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>This option would focus on safety and accessibility improvements and demand management measures predominantly in urban areas. This is still likely to result in some road improvement schemes and increasing levels of traffic in rural areas</p> <p>This is likely to increase</p>	<p>A reduction in air quality, water quality, noise, light emission and dust deposition are all likely to have secondary negative effects on</p>	<p>Impacts mostly in rural areas and, most significantly, where road enhancements or improvements are undertaken near to NNR, SSSI's or other wildlife sites.</p> <p>Greatest impact will be where such sites</p>	<p>Impacts on biodiversity may irreversible dependant upon scale of change.</p> <p>High level of certainty</p>	Option 3

<ul style="list-style-type: none"> habitat loss degradation and fragmentation severance and wildlife road kills disturbance due to increase noise and light pollution run-off and pollution of water and soil which can reduce biodiversity <p>Verge and hedge maintenance with only road safety in mind is unlikely to result in practices most compatible with enhancing biodiversity</p>	<p>biodiversity</p> <p>Increased habitat fragmentation will restrict the ability of species to adapt to climate change through migration.</p>	are already in a vulnerable state		
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	<p>Biodiversity (flora and fauna): moderately adverse</p> <p>Soil & geology: neutral</p>

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	<p>Biodiversity (flora and fauna)</p> <p>Soil & geology</p>	Likely evolution of baseline without plan	<p>Biodiversity (flora and fauna): slightly adverse</p> <p>Soil & geology: neutral</p>	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	<p>Permanent /temporary</p> <p>Level of certainty</p>	Description of possible mitigation
<p>This option will also aim to reduce levels of traffic growth in traffic in rural areas, and manage traffic in order to minimise impacts on the most environmentally sensitive areas</p> <p>This is likely to minimise impacts on</p> <ul style="list-style-type: none"> habitat loss 	<p>A reduction in air quality, water quality, noise, light emission and dust deposition are all likely to have secondary negative effects on biodiversity</p>	<p>Impacts mostly in rural areas and most significantly where road enhancements or improvements are undertaken near to NNR, SSSI's or other wildlife sites.</p> <p>Greatest impact will be where such sites</p>	<p>Impacts on biodiversity may irreversible dependant upon scale of change.</p> <p>High level of certainty</p>	N/A

<p>degradation and fragmentation</p> <ul style="list-style-type: none"> • severance and wildlife road kills • disturbance due to increase noise and light pollution • run-off and pollution of water and soil which can reduce biodiversity <p>Policies on verge and hedge maintenance reflect the need to balance road safety concerns with practices to enhance biodiversity</p>	<p>Increased habitat fragmentation will restrict the ability of species to adapt to climate change through migration.</p>	<p>are already in a vulnerable state</p>		
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	+	+	+	<p>Biodiversity (flora and fauna): slightly beneficial</p> <p>Soil & geology: neutral</p>

Water - resources, quality and flooding

Option 1 - Safety and equality

Sustainability topic	Water - resources, quality and flooding	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
A focus on only road safety and accessibility improvements is likely to result in road improvement schemes and increasing levels of traffic.	Climate change is likely to result in increasing instances of flooding. This in term could lead to increases silt and pollution in waterways	Impacts in the vicinity of watercourses. Any reduction in water quality could have an impact on the biodiversity it can support, but impacts of those watercourses already in a fair or poor state will have a	Impact on water quality in water course is reversible Run off into a groundwater sources used for drinking water would have a irreversible	As per used in option 3
This is likely to	Reduced water			

increase to result in additional run off from roads into waterways Run off into a groundwater source would have a significant impact	quality is likely to a secondary negative effect on biodiversity.	particularly significant impact	impact Secondary Impacts on biodiversity may irreversible dependant upon scale of change. Medium level of certainty	
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	Moderately adverse

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Water - resources, quality and flooding	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
This option would focus on safety and accessibility improvements and demand management measures predominantly in urban areas. This is still likely to result in some road improvement schemes and increasing levels of traffic in rural areas This is likely to result in additional run off from roads into waterways Run off into a groundwater source would have a significant impact	Climate change is likely to result in increasing instances of flooding. This in term could lead to increases silt and pollution in waterways Reduced water quality is likely to a secondary negative effect on biodiversity.	Impacts in the vicinity of watercourses. Any reduction in water quality could have an impact on the biodiversity it can support, but impacts of those watercourses already in a fair or poor state will have a particularly significant impact	Impact on water quality in water course is reversible Run off into a groundwater source used for drinking water would have a irreversible impact Secondary impacts on biodiversity may irreversible dependant upon scale of change. Medium level of certainty	As per used in option 3
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	--	Moderately adverse

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Water - resources, quality and flooding	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>This option will also aim to reduce levels of traffic growth in traffic in rural areas, and manage traffic in order to minimise impacts on the most environmentally sensitive areas</p> <p>The amount of run off from road is unlikely to change significant from the evolution of the baseline</p> <p>Run off into a groundwater source would have a significant impact.</p>	<p>Climate change is likely to result in increasing instances of flooding. This in turn could lead to increases silt and pollution in waterways</p>	<p>Impacts in the vicinity of watercourses.</p> <p>Any reduction in water quality could have an impact on the biodiversity it can support, but impacts of those watercourses already in a fair or poor state will have a particularly significant impact</p>	<p>Impact on water quality in water course is reversible</p> <p>Run off into a groundwater sources used for drinking water would have a irreversible impact</p> <p>Secondary impacts on biodiversity may irreversible dependant upon scale of change.</p> <p>Medium level of certainty</p>	N/A
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	0	0	0	Slightly adverse

Human health and population

Option 1 - Safety and equality

Sustainability topic	Human health and population	Likely evolution of baseline without plan	Noise - slightly adverse Physical fitness - moderately adverse Accidents - neutral Security - moderately adverse Accessibility and equality – neutral	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>A focus on only road safety and accessibility improvements is likely to result in road improvement schemes, faster journey times and increasing levels of traffic.</p> <p>This will have a negative impact on noise due to higher speeds and more traffic</p> <p>This will have an overall neutral impact on physical fitness compared to baseline as although some improvements in safety for vulnerable road users may encourage more walking and cycling, this is likely to be outweighed by enhanced accessibility and faster journey times with no demand management measures encouraging greater car use.</p> <p>This strategy should have a positive impact on reducing accidents by improving road safety, but some benefit may be outweighed due to increased number of journeys due to enhanced accessibility</p>	<p>Improvements in accessibility likely to reduce physical activity</p>	<p>Whole population</p>	<p>Impacts of noise on human health temporary, although could cause permanent damage where threshold levels reached</p> <p>Reducing accidents has a positive effect of reducing potentially permanent negative impacts on human health.</p> <p>Medium level of certainty</p>	<p>As per used in option 3</p>

With no increase in walking and cycling levels and no specific security measures there is likely to be neutral impact on personal security compared to baseline This strategy should reduce severance and increase accessibility.				
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	---	Noise - moderately adverse
	--	--	--	Physical fitness - moderately adverse
	++	++	++	Accidents - moderately beneficial
	--	--	--	Security - moderately adverse
	++	++	++	Accessibility and equality - moderately beneficial

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Human health and population	Likely evolution of baseline without plan	Noise - slightly adverse Physical fitness - moderately adverse Accidents - neutral Security - moderately adverse Accessibility and equality – neutral	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
This option would focus on safety and accessibility improvements and demand management measures		Whole population	Impacts of noise on human health temporary, although could cause	As per used in option 3

<p>predominantly in urban areas.</p> <p>This is likely to result in faster more reliable journey times by car, and increasing levels of traffic in rural areas.</p> <p>Noise impact in urban areas is likely to improve slightly. In rural areas they may get worse due to additional traffic.</p> <p>Demand management measures in urban areas are likely to increase levels of active travel in urban areas.</p> <p>By improving road safety and reducing congestion this strategy should have a positive impact on reducing accidents</p> <p>With an increase in walking and cycling levels in urban areas there should be a positive impact on personal security.</p> <p>This strategy should reduce severance and increase accessibility.</p>			<p>permanent damage where threshold levels reached</p> <p>Reducing accidents has a positive effect of reducing potentially permanent negative impacts on human health.</p> <p>Increasing levels of physical activity would have a long term benefit on human health</p> <p>Increasing personal security would have a temporary beneficial effect</p> <p>Medium level of certainty</p>	
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	0	0	0	Noise - neutral
	+	+	+	Physical fitness - slightly beneficial
	++	++	++	Accidents - moderately beneficial
	+	+	+	Security - slightly beneficial
	++	++	++	Accessibility and equality - moderately beneficial

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Human health and population	Likely evolution of baseline without plan	Noise - slightly adverse Physical fitness - moderately adverse Accidents - neutral Security - moderately adverse Accessibility and equality – neutral	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>This option will also aim to reduce levels of traffic growth in traffic in both urban and rural areas, and manage traffic in order to minimise impacts on the population.</p> <p>Limits on traffic growth and introduction of low noise road surfaces should reduce impacts of traffic noise.</p> <p>Demand management measures and positive promotion of active travel through travel plans etc. is likely to increase levels of active travel.</p> <p>By improving road safety and reducing congestion this strategy should have a positive impact on reducing accidents</p> <p>With an increase in walking and cycling levels in urban areas there should be a positive impact on personal security.</p> <p>This strategy should reduce severance and increase accessibility.</p>		Whole population	<p>Reducing the levels of noise would have a temporary positive impact</p> <p>Reducing accidents has a positive effect of reducing potentially permanent negative impacts on human health.</p> <p>Increasing levels of physical activity would have a long term benefit on human health</p> <p>Increasing personal security would have a temporary beneficial effect.</p> <p>Medium level of certainty</p>	Incorporated in strategy

Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
	+	+	+	Noise slightly beneficial
	++	++	++	Physical fitness - moderately beneficial
	++	++	++	Accidents - moderately beneficial
	+	+	+	Security - slightly beneficial
	++	++	++	Accessibility and equality - moderately beneficial

Material assets

Option 1 - Safety and equality

Sustainability topic	Material assets	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>A focus on only road safety and accessibility improvements is likely to result in road improvement schemes, and increasing levels of traffic</p> <p>This will require more materials for road improvements and increase wear and tear of roads, require more maintenance and use of material assets</p> <p>With no policies on use of recycled</p>	<p>Increased use of road construction and maintenance materials may require more local quarrying and secondary negative environmental impacts on landscape and in increased noise, dust, water quality and subsequence negative impacts on biodiversity</p>	<p>Impact on availability of material assets is potentially national or even global</p> <p>Impact of additional quarrying will be localised to quarry area and lorry routes</p>	<p>Use of material assets is permanent impact.</p> <p>Impacts of quarries on landscape and biodiversity may be permanent</p> <p>Other impacts of quarrying would be temporary</p> <p>High level of certainty</p>	Option 3

materials there would be no mitigation of the impacts of depleting material assets				
With increasing traffic levels there would be increased use of petrol and diesel fuels				
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	---	---	Moderately adverse

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Material assets	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary	Description of possible mitigation
<p>This option would focus on safety and accessibility improvements and demand management measures predominantly in urban areas.</p> <p>This is likely to result in faster more reliable journey times by car, and increasing levels of traffic in rural areas.</p> <p>This will be some requirements for materials for road improvements and increased wear and tear of rural roads, requiring more maintenance and use of material assets</p> <p>With no policies on</p>	<p>Increased use of road construction and maintenance materials may require more local quarrying and secondary negative environmental impacts on landscape and in increased noise, dust, water quality and subsequent negative impacts on biodiversity</p>	<p>Impact on availability of material assets is potentially national or even global</p> <p>Impact of additional quarrying will be localised to quarry area and lorry routes</p>	<p>Use of material assets has some permanent impact.</p> <p>Impacts of quarries on landscape and biodiversity may be permanent</p> <p>Other impacts of quarrying would be temporary</p> <p>High level of certainty</p>	Option 3

use of recycled materials there would be no mitigation of the impacts of depleting material assets				
With increasing traffic levels there would be increased use of petrol and diesel fuels				
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	--	--	-	Moderately adverse

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Material assets	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
This option will also aim to reduce levels of traffic growth in traffic in both urban and rural areas Although there will be some requirements for materials for road improvements, maintenance requirements will be minimised compared to the do nothing option Policies would be put in place to encourage the use of recycled materials in road maintenance and construction. Rate of use of material assets	Increased use of road construction and maintenance materials may require more local quarrying and secondary negative environmental impacts on landscape and in increased noise, dust, water quality and subsequent negative impacts on biodiversity	Impact on availability of material assets is potentially national or even global Impact of additional quarrying will be localised to quarry area and lorry routes	Use of material assets has some permanent impact. Impacts of quarries on landscape and biodiversity may be permanent Other impacts of quarrying would be temporary High level of certainty	Incorporated

would be slowed, putting off the need for further quarry sites in the county until the longer term				
Promotion of bio-fuels, fuel efficiency and renewable fuels should help to reduce use of oil.				
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	+	+	++	Slightly beneficial

Economy and equality

Option 1 - Safety and equality

Sustainability topic	Economy and equality	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary	Description of possible mitigation
			Level of certainty	
<p>A concentration on accessibility and the provision of improved public transport services may make it easier for people to reach larger towns and support businesses in these towns.</p> <p>However, increased accessibility may have a negative impact on the economy of smaller settlements as people travel further to access services.</p> <p>Nothing to tackle traffic growth trend, may lead to higher levels of congestion in town centres.</p> <p>No specific measures to protect</p>	<p>Increased access to major towns supports larger businesses rather than small local businesses, which could in turn lead to a reduced diversity of choice.</p> <p>Congestion may lead to less attractive town centres which may deter visitors to businesses. Congestion can also cost businesses in terms of wasted time and fuel expenses.</p> <p>Shropshire's unique environment is one of major attractions for inward investment. Unchecked</p>	<p>Businesses in small rural settlements and smaller market towns at risk.</p> <p>Areas reliant on tourism vulnerable, important contributor to Shropshire's economy.</p>	<p>Impact on economy and loss of businesses in smaller settlements may be irreversible.</p> <p>Low level of certainty.</p>	<p>Increase accessibility by providing more services at a local level rather than increasing transport options.</p>

Shropshire's unique environment.	deterioration of environment may deter investment.			
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	-	--	--	Moderately adverse

Option 2 - Safety and health, equality, economic growth and carbon

Sustainability topic	Economy and equality	Slightly adverse	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>A concentration on accessibility and the provision of improved public transport services may make it easier for people to reach larger towns and support businesses in these towns.</p> <p>However, increased accessibility may have a negative impact on the economy of smaller settlements as people travel further to access services.</p> <p>Measures to reduce traffic and congestion in towns will improve/maintain their attractiveness, but may also deter visitors who wish to access town centre by motor vehicle.</p>	<p>Increased access to major towns supports larger businesses rather than small local businesses, which could in turn lead to a reduced diversity of choice.</p> <p>Shropshire's unique environment is one of major attractions for inward investment. Unchecked deterioration of environment may deter investment.</p>	<p>Businesses in small rural settlements and smaller market towns at risk.</p> <p>Areas reliant on tourism vulnerable, important contributor to Shropshire's economy.</p>	<p>Impact on economy and loss of businesses in smaller settlements may be irreversible.</p> <p>Low level of certainty.</p>	<p>Increase accessibility by providing more services at a local level rather than increasing transport options.</p>
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	-	-	-	Slightly adverse

Option 3 - Safety and health, equality, economic growth and carbon & quality of life

Sustainability topic	Economy and equality	Likely evolution of baseline without plan	Slightly adverse	
Primary effects prediction	Secondary (indirect) synergistic or cumulative effects	Geographical scale (value & vulnerability of areas effected)	Permanent /temporary Level of certainty	Description of possible mitigation
<p>A concentration on accessibility and the provision of improved public transport services may make it easier for people to reach larger towns and support businesses in these towns.</p> <p>However, increased accessibility may have a negative impact on the economy of smaller settlements as people travel further to access services. Development of sustainable transport alternatives across wider areas. Some reduction in demand to travel and shift to more sustainable transport modes reducing overall traffic growth.</p> <p>Measures to reduce traffic and congestion in towns and town centre enhancement schemes will improve/maintain their attractiveness.</p>	<p>Increased access to major towns supports larger businesses rather than small local businesses, which could in turn lead to a reduced diversity of choice.</p> <p>More visitors are attracted by maintenance of natural and historic environment through reduced traffic levels and congestion and enhancements to town centres</p>	<p>Businesses in small rural settlements and smaller market towns at risk.</p> <p>Historic town centres may benefit from tourism</p>	<p>Impact on economy and loss of businesses in smaller settlements may be irreversible.</p> <p>Low level of certainty.</p>	<p>Increase accessibility by providing more services at a local level rather than increasing transport options.</p>
Qualitative assessment	Assessment - short term	Assessment - medium term	Assessment - long term	Summary assessment
Not available	+	+	+	Slightly beneficial

Appendix 4 Local Transport Plan strategy policies

Economy and growth

Policy E1: Air travel

We will support improvements to public transport access between Shropshire and nearby Airports.

We would take a view on the development of a sub-regional Business Airport at Cosford if proposals came forward, taking into account the economic merits of opening up international linkages as well as local environmental impacts.

Policy E2: M6 toll road link

We will support the Highways Agency, the M6 Toll Road operator and neighbouring authorities in providing of a new motorway standard link between the M54, M6 North and M6 Toll.

Policy E3: Strategic road network reliability improvements

We will support the Highways Agency in seeking to improve the reliability, safety and efficiency of the strategic roads within Shropshire.

We would particularly support:

- Safety improvements on the A49 that did not negatively impact on the Shropshire Hills AONB
- Dualling or partial dualling of the A5/A483 north of Shrewsbury
- Improved junction capacity at junctions on the A5 Shrewsbury and Oswestry by-passes

Policy E4: Network management

We will improve the management of the road network to reduce and prevent congestion and disruption.

This will be achieved by:

- Completing a Road Hierarchy Review to ensure the classification, management and maintenance of county's roads reflects their existing function.
- Introducing Urban Traffic Management and Control Systems where there are significant numbers of traffic signals. Using the system to smooth traffic flows, better manage available road capacity, respond to events on the network, encourage the use preferred routes and to provide greater priority to pedestrians, cyclists and buses.
- Using Traffic Regulation Orders to prevent parking that would cause unacceptable traffic delays or safety concerns
- Utilising our civil enforcement powers to proactively tackle illegal parking
- Considering seeking powers to enforce moving traffic offences e.g. yellow box junctions, one way streets, routes restricted to certain types of vehicles, bus lanes and weight limits where it causes congestion, environmental intrusion or it is detrimental to road safety.
- Where feasible providing adequate passing places and lay-bys on principal routes to enable overtaking of slow moving vehicles
- Improved co-ordination and management of planned events, road and streetworks; including the introduction of a permit scheme to act as an incentive to reduce the amount of time spend on the highway.
- Improved incident response and contingency planning to establish diversionary routes quickly and enable roads to be returned to normal operation as soon as

possible after an unplanned event such as an accident, especially on traffic sensitive roads.

- Improved information available to the public of current and planned road closures, roadworks, obstructions, and other events.

Policy E5: Tackling Shrewsbury's traffic problems

We will implement an Integrated Transport Strategy for Shrewsbury as funding opportunities become available. We do not expect to promote full construction of the Shrewsbury North West Relief Road during the plan period, but will retain the ability to construct the road in future if necessary.

Key elements of the integrated transport strategy will be:

- Encouraging and facilitating traffic to use the inner ring road and outer bypass in preference to travel through the town centre.
- Traffic management measures, including urban traffic control to improve capacity of key junctions, particularly on inner and outer bypass routes.
- Reducing, over time, the levels of car parking within the river loop; and prioritising use of park and ride and edge of town centre parking.
- Significant improvements to the walking, cycling and public transport networks in Shrewsbury
- Reductions in traffic, increased pedestrian priority and environmental enhancements with the town centre; including better connection of the town with the river
- Development of a Shrewsbury Parkway Rail Station incorporating a fourth park and ride site; this is likely to be towards the later part of the plan period.
- Any significant new development along the identified line of a possible future North West Relief Road will be required to either construct part of the road to an appropriate standard or protect the line as appropriate, in order that the full road might be provided in future if necessary and affordable.

Policy E6: New roads and bypasses

We will make best use of our existing roads by increasing capacity before considering building new roads.

New road building will be restricted to where all other options have been fully considered, the benefits significantly outweigh the costs (both financial and environmental), and for which funding is available. Competing schemes would be prioritised on the basis of their cost benefit assessment.

Policy E7: Car parking and park and ride

We will ensure provision of adequate car parking in Shropshire towns and other key visitor locations. We will manage car parking spaces in a way that will make most efficient use of parking space to support local economies and encourage use of alternative travel modes where available, making use of park and ride where viable.

This will be achieved by:

- Setting parking charges in a consistent manner across Shropshire based on a town hierarchy, reflecting the size and parking demand in each town.
- Ensuring there is provision of adequate town centre parking space to meet demand; in larger towns the required space may be split between town centre parking and edge of town park and ride provision.
- Encouraging the most efficient use by shoppers of prime on and off street parking spaces through the use of time restrictions and charges where appropriate.
- Encouraging long stayers, including commuters, to use alternative modes or more distant car parking
- Where alternatives are available aiming to establish a hierarchy based on pricing that encourages local bus use, followed by park and ride, then town centre parking.

- Maintaining existing park and ride services and seeking to expand park and ride, with a particular focus on a site to the east of Shrewsbury, and a new park and ride service for Oswestry.
- Improving car parking signage and information to encourage use of the most appropriate car parks and discourage unnecessary traffic circulation in towns.
- Enabling the creation of residents parking zones where there is majority support from local residents
- Encouraging private non-residential car park owners to produce travel plans which address levels and management of parking within their sites, and seek compatibility with the Council's transport and parking policies. New developments will be required to adhere to parking standards and develop effective travel plans.

Policy E8: Access to work

We will seek to maintain and improve access to work and training opportunities while reducing car dependency.

This will be achieved by:

- Ensuring the continued provision of bus services in towns and on strategic routes at key morning and evening commuting times
- Seeking opportunities to improve bus services to better serve employment locations at times to suit shift patterns, where funding is available.
- Seeking funding through 106 agreements from significant new employment development where there is a need to improve bus services to serve the development
- Encouraging car-sharing through workplace and town based car sharing schemes
- Assisting employers in developing workplace travel plans to improve access to their workplace particularly by sustainable travel modes, as well as considering initiatives such as home working and tele-working to reduce the need to travel
- Requiring the development of travel plans for significant new developments.
- Working with partners to support the Wheels to Work programme which provides tailored transport solutions to individuals finding lack of transport a barrier to accessing employment opportunities.
- Placing a high priority on improvements to walking and cycling routes used by commuters
- Further developments of park and ride services and enhanced marketing and incentives for commuter and business use.

Policy E9: Supporting sustainable tourism

We will seek to enhance tourist access and experience, manage tourist traffic and encourage greater use of sustainable modes

This will be achieved by:

- Seeking to enhance the street environment and public realm in Shropshire's towns, providing greater priority for pedestrians, shoppers and visitors to enjoy the historic environments, contributing to enhanced vibrancy and vitality and tourism experience.
- Encouraging greater use of park and ride where it exists by visitors through improved information and promotion and signing
- Seeking to improve traffic and car parking signage to assist visitors and reduce unnecessary traffic in town centres
- Providing sufficient, free coach parking in Shropshire Council car parks
- Enabling the signing of appropriate visitor attractions in line with our tourism sign policy
- Seeking to enhance the use of information and view point lay-bys at appropriate locations.
- Supporting and promoting tourism related walking, cycling and horse riding, through improved promotion, information and signing; appropriate route maintenance and targeted network improvements.

Policy E10: Location and design of new development

We will ensure that new developments are located, designed and served by transport in ways that enhance accessibility and reduce car dependency.

This will be achieved by:

- The continued development of the Local Development Framework documents including the Site Allocations and Management of Development DPD; and implementation of the policies through the Development Management process.
- Requirements for transport assessments and the development of travel plans for significant new developments.
- Producing a residential highway design guide to promote best practice in the layout and design of new developments.
- Requiring promoters of new developments to either provide or financially contribute to the provision of necessary transport infrastructure and services, through site specific agreements or payment of a community infrastructure levy.

Traffic, carbon and environment

Policy C1: Rail infrastructure

We will support the Department for Transport Rail Group, the Welsh Assembly Government and Network Rail in undertaking improvements to rail lines and station infrastructure that will enhance the speed, capacity and attractiveness of rail travel in and to Shropshire.

We would particularly support:

- Line speed improvements on the Wolverhampton to Shrewsbury and Chester to Shrewsbury lines
- The electrification of the Wolverhampton to Shrewsbury Line
- Provision of CCTV at stations where anti-social behaviour is a problem
- Improved passenger waiting and interchange facilities and information at stations

Policy C2: Rail services and information

We will support the DfT and Train Operating Companies in improving frequency, quality, reliability, comfort and affordability of train services in Shropshire.

We would particularly support:

- Reinstatement of a direct service between Shrewsbury and London
- Enhanced service reliability
- Additional train capacity or more frequent services at peak times on the Shrewsbury to Birmingham route
- Provision of an hourly service on the Aberystwyth to Shrewsbury line, with the possible extension of this service to Crewe.
- The provision of better services between Shrewsbury and Crewe, particularly a return evening commuter service at around 17:30 from Shrewsbury
- Extension of some services from Shrewsbury to Manchester, to access Manchester Airport
- A fifth train per day in the Heart of Wales line

Policy C3: Access to rail stations

We will seek to work with partners to improve access by a range of modes to rail stations in Shropshire enhancing awareness and information about services.

This will be achieved by:

- Developing a new Shrewsbury Parkway Station to the east of Shrewsbury at Preston Boats, in the medium term.
- Working with partners to expand station car parking facilities where required and viable

- Improving access to stations by cycle and foot, including improved routes to stations and provision of adequate cycle parking facilities
- Encouraging bus and rail operators to co-ordinate bus and rail times
- Promoting 'plus bus' through ticketing for combined rail and bus journeys
- Ensuring sufficient information regarding other forms of transport is available to persons arriving by train at the stations within the county
- Ensuring sufficient information regarding rail services is available both at rail stations and in the communities served
- Supporting the work of the Community Rail Partnerships in promoting services and stations and negotiating improvements.

Policy C4: Managing freight

We will accommodate the necessary movement of freight to and through Shropshire while seek to reduce the impacts of HGVs on the environment and local communities

This will be achieved by:

- Facilitating the movement on freight on strategic routes and enabling necessary access to rural sites such as quarries and farms.
- Ensuring sufficient provision of HGV parking and rest areas on identified routes
- Considering the potential impact of goods movements associated with new development through the planning process, particularly for rural developments.
- Encouraging greater movement of goods by rail, including promotion to local business of the Telford Rail Freight Terminal at Donnington, Telford.
- Using signing to encourage HGV traffic to use the most appropriate available routes where impacts on local communities and sensitive environmental areas can be minimised.
- Work with the DfT and other local authorities to improve the data used by satellite navigation systems; the aim would be for 'Sat Nav' systems to identify routes unsuitable for HGVs and promote the most appropriate freight routes
- Considering the introduction of weight restrictions where communities are impacted by significant HGV movements and there are reasonable and more suitable alternative routes available.

Policy C5: Encouraging more sustainable travel choices

We will use promotional techniques to proactively encourage more sustainable travel habits

These will include:

- Lead by example through the implementation of the Shropshire Council travel plan, with a focus on reducing unnecessary business mileage, reducing the carbon impact of essential business journeys and encouraging and rewarding more sustainable commuting practices.
- Supporting and promoting technologies, initiatives and services which reduce the need to travel e.g. tele-conferencing, homeworking, local and remote provision of services
- Working with schools and colleges to assist them in implementing and reviewing their School Travel Plans
- Assisting more workplaces to develop effective travel plans and where appropriate parking policies that encourage sustainable travel.
- Requiring effective travel plans for all significant new development
- Utilising Personalised Travel Planning techniques to encourage behavioural change in a designated community; this technique will be targeted at people experiencing a period of lifestyle change or linked physical service improvements.
- Promoting and encouraging the development of local Car Clubs
- Promoting and facilitating car sharing
- Undertaking event focused and longer term travel awareness campaigns

Policy C6: Improving vehicle efficiency

We will aim to reduce the amount of carbon and other pollutants produced per mile travelled by:

- Enforcing a maximum age limit for vehicles used on contracted services, including bus services, and for licensed taxi's and private hire vehicles.
- Aiming to use vehicles complying to the latest Euro emission standards (currently euro 5; euro 6 expected in 2014) for vehicles operating intensively within particularly sensitive areas such as Air Quality Management Areas e.g. park and ride buses.
- Explore the use of low emission, alternatively fuelled or hybrid technology vehicles for introduction on public transport services in Shropshire.
- Demonstrate best practice by requiring all council owned fleet vehicles to comply with the latest euro emission standards.
- Encouraging businesses and the public to purchase and use cleaner and more fuel efficient vehicles, for example through travel plans and awareness campaigns, with a particular focus on high mileage business users.
- Facilitating the increase in availability of alternative fuels and refuelling/charging points
- Considering changes to council's policies that would encourage use of very low emission vehicles, for example reductions in parking charges, where this is practical to implement.
- Promoting more efficient driving styles and practices through driver training courses and awareness campaigns.

Policy C7: Improving air quality

We will aim to reduce air pollution from traffic through general measures to manage traffic and emission levels, and targeted solutions for areas of specific concern.

This will be achieved by:

- Following other policies set out in this chapter to discourage traffic growth and reduce vehicle emissions across Shropshire
- Undertaking a review of the effectiveness of our existing Air Quality Management Area Action Plans and monitoring regimes and developing a single integrated Shropshire Air Quality Strategy
- In areas with particularly poor air quality consider site specific measures to reduce traffic flows, restrict or reduce the most polluting vehicles, reduce congestion and smooth traffic flows
- Continue to undertake a programme of air quality monitoring and review

Policy C8: Reducing traffic noise

We will aim to prevent and reduce impacts of noise from road transport where necessary and practicable, focusing on areas where human health could be affected

This will be achieved by:

- Undertaking an assessment of the major roads in Shropshire identified in the DEFRA Noise Action Plan, consider the necessity of intervention if required identify any reasonable interventions that could be implemented to reduce noise or noise impact; for example use of noise barriers, introduction of low noise surfacing, reduced speed limits, HGV restrictions or other traffic management measures.
- Where necessary utilising appropriate surfacing materials to reduce noise levels, whilst preserving safety for all users and the sustainability of the highway asset.
- Considering measures to encourage the most appropriate routing of HGV traffic to reduce noise impacts on communities as set out in policy C4.

Policy C9: Reducing environmental impacts

We will minimise the impacts of traffic, roads and highways authority activities on Shropshire's landscape, townscape, heritage, biodiversity, water and soil quality; and seek to minimise use of non renewable resources.

This will include:

- Utilising the minimum amount of street signage in order to providing necessary traffic information to reduce street clutter and visual intrusion
- Making use of appropriate construction materials when undertaking maintenance and implementing traffic schemes in sensitive rural and historic areas
- Where affordable, taking opportunities to enhance the quality of public realm and setting for historic buildings and conservation areas, and to protect historic structures from potential collisions.
- Taking opportunities to upgrade street lights to modern standards that consume less energy and minimise light pollution, reduce unnecessary lighting and switch off lights when not required.
- Supporting the limited introduction of concealed off-highway parking of an appropriate scale in sensitive rural locations to reduce visual intrusion from parked vehicles.
- Encouraging and increasing the amount of sustainable, recycled and reclaimed materials used in building and maintaining roads; and use of recycled street furniture
- Following roadside verge and hedgerow cutting practices which enhance habitats and minimise wildlife impacts
- Taking opportunities to create new habitats as part of highway improvement schemes e.g. habitat for bats and sand martins in replacement bridge structures
- Reducing severance and possibilities of road collisions through crossing provisions such as badger tunnels in upgraded or new highway infrastructure
- Minimising winter salt use to reduce impacts from salt run-off on habitats
- Minimising the risk of flooding, water contamination, soil contamination.

Maintain the highway network

Policy H1: Cost effective asset management

We will take a whole life approach to highways investment and will increase the proportion of the network maintained under an asset preservation regime. We will use this approach where it is prudent to do so, whilst ensuring that remedial work is undertaken where required to ensure safety of users.

This will be achieved by:

- Network condition data being used in the targeting of maintenance on specific parts of the network.
- Highway maintenance being targeted not only at areas in poor condition, but also at areas in fair condition to prevent their further deterioration
- Greater and more frequent use of low cost surface dressing treatments to prolong the network life to avoid the need for expensive major renewal
- Making highway investment decisions on a whole life basis, i.e. considering future highway maintenance costs early in a scheme design

Policy H2: Maintaining a safe highway

We will maintain highways in a safe condition

This will be achieved by:

- Operating a reasonable regime of safety inspections and dealing with defects using a risk based approach as defined in the safety inspection manual.
- Managing the risk of wet-road skidding incidents using our skidding resistance policy.
- Undertaking highway maintenance according to our published maintenance standards.
- Treating designated parts of the highway in winter to keep it free of frost, ice and snow, in line with our winter maintenance policy. We will seek to expand the number of roads; and particularly pavements and cycleways which are treated if affordable to do so.
- Keeping water away from the road surface by providing and maintaining adequate drainage.
- Providing and maintaining essential street and footpath lighting

- Maintaining the many bridges and other structures that form part of the highway network, and strengthening them if necessary to cater for modern traffic, or restricting their use by heavy vehicles

Policy H3: Reducing our environmental impact and responding to climate change

Where practicable we will adopt highway maintenance practices which enhance efficiency, reduce waste and natural resource use and minimise local environmental impact. We will also adapt to the new highways maintenance challenges resulting from climate change.

This will be achieved by:

- Operating an asset preservation approach which makes extensive use of surface dressing which uses less resources and energy than full structural renewal
- We will continue to use recycled materials for highway maintenance reducing energy consumption
- We will consider the use of products for road surface which can be laid at lower temperatures reducing energy costs needed to heat.
- We will investigate ways to reduce the environmental impact of street lighting including the use of low carbon technology such as LED lighting and part night switching.
- We will manage the impact of more severe wet weather by keeping the carriageways sealed by applying regular surface dressing and keeping highway drains clear by an appropriate frequency of cleaning.
- We will ensure that maintenance standards give a high priority to the needs of more sustainable modes including pedestrian and cyclists
- Consider environmental impacts and opportunities for environmental enhancements when undertaking highway maintenance (e.g. biodiversity) see policy C9.

Accessibility and health

Policy A1: Supported bus network

We will define minimum standards for the network of public bus services in Shropshire in a Bus Strategy. We will provide a subsidy to achieve this minimum bus network if it cannot be provided on a commercial basis.

The key principals in defining the minimum bus network are:

- In larger urban areas and on principal interurban routes we will seek to ensure a level of service which can provide a good level of accessibility to employment and essential services, and provide a reasonable alternative to travel by car
- In more rural areas an affordable transport service will be provided which will enable residents to access essential services and prevent social exclusion; however this may not be a daily service and is not likely to be suitable as a means of accessing employment. This is likely to be via a demand responsive or community transport solution.
- We would seek to provide enhanced bus services above the minimum standard where this was affordable and services could demonstrate good value for money and tangible accessibility or modal shift benefits

Policy A2: Bus network enhancements

We will seek to achieve transport services in addition to the minimum network, in order to enhance accessibility, support the economy and encourage modal shift where it is affordable to do so.

This may be achieved by:

- Entirely commercial or voluntary provision of a service- where demand is such that a service would provide no or only nominal public subsidy.
- Securing of specific additional resources to fund service improvements, such as through specific grants or developer contributions.

- Increase overall bus use and revenue generation and/or reduce operating costs so that the public subsidy available can support a greater number of services.
- Seeking opportunities with bus operators to develop new quality partnership schemes to improve commercial service provision. Where operators are unwilling to participate we may instead look to implement a Statutory Quality Partnership.

Policy A3: Bus fares and ticketing

We will aim to work with the DfT and operators to maintain the affordability of public transport and target any financial assistance where there is the greatest need.

This will be achieved by:

- Undertaking regular fare reviews, setting fares with reference to contract costs and commercial fares, on supported services where the fare structure is issued and managed by Shropshire Council.
- Implementing the English National Concessionary Travel Scheme for older and disabled people
- Working with operators to explore ways of addressing the affordability of public transport for other low income groups, including young people and job seekers.
- Supporting the introduction of smartcard ticketing by operators and work together on maximising the potential of the technology to introduce innovative ticketing.

Policy A4: Improve public transport information and marketing

We will work with operators to raise the awareness of services, improve attitudes to bus services, and enhance the availability, quality and appropriateness of passenger transport information.

This will be achieved by:

- Increasing awareness of web based timetable information and planning tools i.e. Traveline, Transport Direct
- Where appropriate, formalising unmarked bus stops and install flags and timetables to provide promotion and information about the service available.
- Seeking to reinstate and expand the use of Real Time Information at bus stops
- Using personalised marketing and promotion.

Policy A5: Other bus enhancements

We will seek to implement other bus service and bus infrastructure enhancements as affordable to enhance the service reliability, interchange and customer comfort and reduce environmental impact.

These will include:

- Where possible we will seek to set, or influence service timetables so as to enhance opportunities for bus to bus or bus to rail journey integration
- Implementation of bus priority measures at congestion hotspots to enhance journey speed and reliability; this is most likely to be in the form of traffic signal priority
- Working with parish and town councils to improve bus shelters and town bus interchanges and waiting facilities
- Replacement or upgrade of the Shrewsbury bus station
- Continue to seek expand the use of modern low emission and low floor accessible buses through our contract requirements.
- In light of any national review of the home to school transport policy continue to enable and encourage bus use for educational journeys particularly at secondary and tertiary level.

Policy A6: Community and voluntary transport

We will support the work of community groups and organisations and volunteers in providing innovative local transport solutions where these are proven to meet a local accessibility need, meet quality and safety standards and be good value for money.

This will include:

- Support for 'ring and ride' schemes providing access for disabled people unable to use conventional town bus services
- Support for community bus schemes in rural areas with a limited bus network
- Support for the Shropshire Community Car scheme that is operated by volunteer owner-drivers using their own private vehicles and co-ordinated at local level.
- Consideration and support other innovative ways of enhancing accessibility for key target groups e.g. "Wheels 2 Work" moped loan scheme for job seekers

Policy A7: Taxis and private hire vehicles

We will perform our licensing duty for Hackney Carriages and Private Hire Vehicles to ensure accessibility, safety and passenger comfort.

This will include:

- Requiring all Hackney Carriages to be wheelchair accessible
- Limiting the age of Hackney Carriages and Private Hire Vehicles to ensure safety and to minimise environmental impacts

Policy A8: Improving access for people with disabilities

We will take all reasonable steps to remove barriers to accessibility experienced by people with disabilities

This will include:

- Expanding the availability of accessible low floor buses through our contract requirements. And introduce a rolling programme to install raised kerbs and suitable areas of hard standing at bus stops to enable level access.
- Seek to improve accessibility of Shrewsbury bus station, and work with the rail industry to encourage improved accessibility at rail stations in Shropshire.
- Support specialist 'ring and ride' and community transport services which provide essential access for people with additional transport needs.
- Encourage driver training to enhance disability awareness
- Enforcing misuse of disabled parking bays and illegal parking which causes obstructions to pavements and dropped crossings which reduces mobility for disabled people. Seek to increase enforcement of parking on the footway.
- Ensure new the design of highway improvement schemes fully considers the needs of people with disabilities or mobility restrictions; through use of up to date Mobility Guidance by designers and introduction of an audit tool, such as a Vulnerable Road User audit, that must be completed as part of the scheme design process.
- Ensure all licensed Hackney carriages are of a design that can accommodate wheelchairs

Policy A9: Cycle infrastructure

We will improve conditions for cycling in ways which will encourage more people to choose to cycle for local journeys.

This will be achieved by:

- Safety improvements through reviews of speed limits and speed enforcements (see policy S3 & 4)
- Design of new residential business and retail areas in ways which prioritise access by cycle and foot.
- Provision of cycle tracks, cycle lanes, junction improvements, toucan crossings and other route enhancements as appropriate to provide safe, convenient and continuous routes for cyclists
- Signing and promotion of advisory routes for cyclists; including the promotion of National Cycle Network routes, inter-urban routes and local leisure routes; these would generally promote use of existing quiet roads and lanes.
- Conversion of disused railway lines and development of other traffic-free rural routes for cycling, walking and horse riding, where feasible and where funding is available

- Working with partners to provide appropriately designed and positioned cycle parking at key destinations including shops, leisure facilities, employment locations, educational establishments, health facilities and public transport interchanges
- Provision of appropriate storage for cycles in all new residential business and retail developments

Policy A10: Encouraging cycle use

We will seek to create a cultural environment where residents feel cycling is a safe and natural transport choice for many local journeys

This will be achieved by:

- Ready availability of good information on cycle routes and facilities in the area, including areas maps, online planning tools and on street signage
- Use of time based signage to encourage an understanding of distances that can be covered by cycle in a relatively short time
- Cycle training available for adults as well as children at primary and secondary schools
- Packages of promotional activities and advice, supporting new infrastructure and targeting key groups and journey purposes e.g. Bike fest, Bike It
- Promotion of cycling through school travel plans
- Promotion of cycling at the work place, linked to workplace travel plans
- Improving the availability of bikes in working order through promotional activities such as 'Dr. Bike' sessions.

Policy A11: Pedestrian infrastructure

We will improve conditions for walking in ways which will encourage more people to walk for local journeys.

This will be achieved by:

- Improving safety for pedestrians through reviews of speed limits and speed enforcement (see policies S 3& 4)
- Ensuring design of new residential areas in ways which prioritise permeability by cycle and foot and enable pedestrians to follow desire lines.
- Prioritising provision of new pavements or footpaths where there is no current provision, a significant demand to walk and where speed limits can't be reduced to 20mph.
- Involving local communities in reviewing existing pedestrian provision, identifying missing links and physical and psychological barriers e.g. poor lighting, narrow points, lack of road crossings; and make improvements on a prioritised basis
- Take opportunities to provide and upgrade crossing points to give pedestrians' greater priority and convenience, including minimising waiting times and avoiding staggers and indirect routes
- Reviewing and improving maintenance arrangements for footways.
- Reviewing and improving information, orientation and signing for pedestrians at appropriate locations
- Working with school communities to identify physical barriers to walking and cycling to school and implementing 'safer routes to school' schemes on a prioritised basis in conjunction with school travel plans.
- Taking a holistic approach to walking infrastructure, and improving co-ordination of management, maintenance and promotion of highway and rights of way networks.

Policy A12: Encourage walking

We will seek to create a cultural environment where more residents regularly choose to walk for local journeys of up to around 2km.

This will be achieved by:

- Promotional activities and campaigns emphasising the health benefits of walking; targeting key groups and journey purposes.

- Encouraging leisure and utility walking through promotion of good quality local routes, providing an indication walking times.
- Making pedestrian training available for primary age children.
- Promotion of walking through school travel plans.
- Promotion of walking at the workplace, linked to workplace travel plans.
- Supporting walking for health initiatives.

Safety and security

Policy S1: Safety schemes

We will analyse the road traffic accident database to identify the geographical areas or routes with the highest levels of casualty accidents; undertake safety reviews to identify safety problems and solutions at these sites, and implement cost effective safety improvements on a prioritised basis.

Appropriate interventions may include:

- Review of speed limits and measures to encourage compliance with speed limits
- Improvements to lines and signs
- Protection for right turning vehicles
- Use of vehicle activated signs to identify particular hazards such as bends or junctions
- Use of antiskid road surfaces at bends and junctions
- Improvements targeted specifically at improving motorcyclist safety, including improved hazard markers at bends ("Where you look is where you go" system)
- Safety barriers and other road restraint systems
- Introduction of 'crash friendly' signposts and lighting columns
- Junction specific treatments
- Carriageway narrowing and pedestrian refuges in urban areas
- Considering improvements to maintenance practices e.g. more frequent vegetation cutting at specific locations to improve visibility
- Provision of pedestrian and/or cyclist facilities (e.g. crossings, footways, cycleways), or in low speed situations consideration of shared space.

Policy S2: New and improved roads and road maintenance

We will take opportunities when undertaking structural maintenance or significant highway improvements to improve road safety

This will be achieved through:

- Requiring safety audits to be undertaken for all significant changes to the highway
- Complying with the latest safety standards when replacing or installing new infrastructure, e.g. appropriate road surfacing, using 'crash friendly' signs.
- Taking opportunities to upgrade the safety rating of roads when carrying out structural maintenance, for example undertaking minor roads realignment, improving signing and lining.
- Effective management of street works to ensure safe passage for all road users while road works are taking place.

Policy S3: Appropriate speed limits

We will set appropriate speed limits for the function and nature of local roads in line with government guidance; taking into account the local environment, nature of the road, mix of road users, and accident history. Speed limits will be reviewed and changed on a prioritised basis subject to funding availability. The minimum amount of signing to comply with legal requirements will be used.

We will work over a period of time to a situation where:

- On rural single carriageway roads:
 - Higher quality strategic roads with few bends, junction, accesses, and low accident rates will have a 60mph speed limit.

- Lower 50 mph and 40mph speed limits will have been considered where there are relatively high numbers of bends or junctions, high accident rates, or high numbers of vulnerable road users.
- We will consider the application of 40mph speed limits for unclassified rural roads with high accident rates, where there is a predominantly local access or recreational function; and on routes recommended for vulnerable road users
- The normal speed limit in villages will be 30mph
 - On urban roads:
 - 20 mph limits and zones are common in town centres, outside schools and in residential areas, particularly where there is a high risk to vulnerable road users.
 - 30mph will be the standard speed limit
 - Use of 40mph speed limits will be limited to higher quality roads and those on outskirts of urban areas where there is little development and separate provision for vulnerable road users
 - 50mph will be used only on special roads, dual carriageways, ring roads, radial routes and bypasses

Policy S4: Compliance with speed limits

We will work with our partners to use a variety of cost effective techniques to encourage and enforce compliance with speed limits.

This will be achieved through:

- The use of vehicle-activated signs to reinforce the speed limit. These will be used at sites on a rotating basis at sites where there is a demonstrated speeding problem.
- Provision for other organisations i.e. parish councils to fund or partly fund vehicle activated signs at agreed locations where there is local concern over speeding but not a demonstrated problem.
- Continued active membership of the ‘*Safer Roads Partnership in West Mercia*’ working with West Mercia Police, other local highway authorities, Fire & Rescue Services, the Courts and NHS Primary Care Trusts to make roads in the region safer for all users through speed enforcement and by seeking to change attitudes and driving behaviour.
- Supporting the Safer Roads Partnership’s use of mobile safety cameras to encourage compliance with speed limits at locations where there is a demonstrated speed problem, as well as a significant collision history or a high level of concern from local people. In future we will encourage the Partnership to consider using time-over-distance (average speed) cameras on sections of main road where little traffic joins or leaves.
- Offering Speed Awareness Courses (through the Safer Roads Partnership) to drivers facing certain speeding offences as an alternative to the fixed penalty process.
- Using low cost engineering speed reducing methods (e.g. village gateways, carriageway markings) where additional efforts need to be made to encourage compliance with the speed limit.
- Considering the limited use of physical traffic calming (e.g. road humps or narrowing) as a last resort in limited areas when there is a definite need to manage vehicle speeds downwards as identified through accident data. This will only be considered where there is clear local support.
- New roads being designed to naturally encourage compliance with the designated speed limit, including encouraging the use of shared space in new residential areas to encourage slow speeds and pedestrian priority.

Policy S5: Road safety education, training and publicity

We will work in partnership to provide a road safety education, training and publicity package that has a particular focus on high risk groups and activities.

Activities will include:

- Providing advice, support and curriculum linked resources for delivery of road safety education at pre-schools, schools and colleges throughout Shropshire. Where affordable this will be enhanced with classroom presentations and theatre style

learning. Education for older age groups will include a strong element of young driver education.

- Making 'Bikeability' style cycle training available to all year 6 pupils and offering additional secondary level and adult training where there is demand.
- Promoting and co-ordinating the delivery of "Stepping Out" pedestrian training for primary level pupils, with a focus on areas with high child pedestrian casualty rates
- Providing information on and encouraging take up of motorcyclist, moped and scooter training; and using targeted publicity to encourage safer motorcyclist behaviour
- Improving awareness of risk for young drivers thorough publicity campaigns and education programmes; promoting the 'pass plus' training for new drivers to enhance skills and knowledge.
- Encouragement for schools and parents to operate 'walking buses', practical sessions to assist in the transition from junior to secondary school e.g. accompanied cycle or walking training.
- Targeted road safety campaigns, linking with national and regional initiatives, focusing on tackling high risk minority road user behaviours, including drink driving, drug use, mobile phone use and tiredness awareness campaigns
- The provision of School Crossing Patrols where justified.
- Providing driver assessment and training for individuals and organisations, particularly focused on occupational road risk and fleet training.
- Making the National Driver Improvement Scheme available as an alternative to prosecution for some moving traffic offences.

Policy S6: Reducing personal security fears when travelling

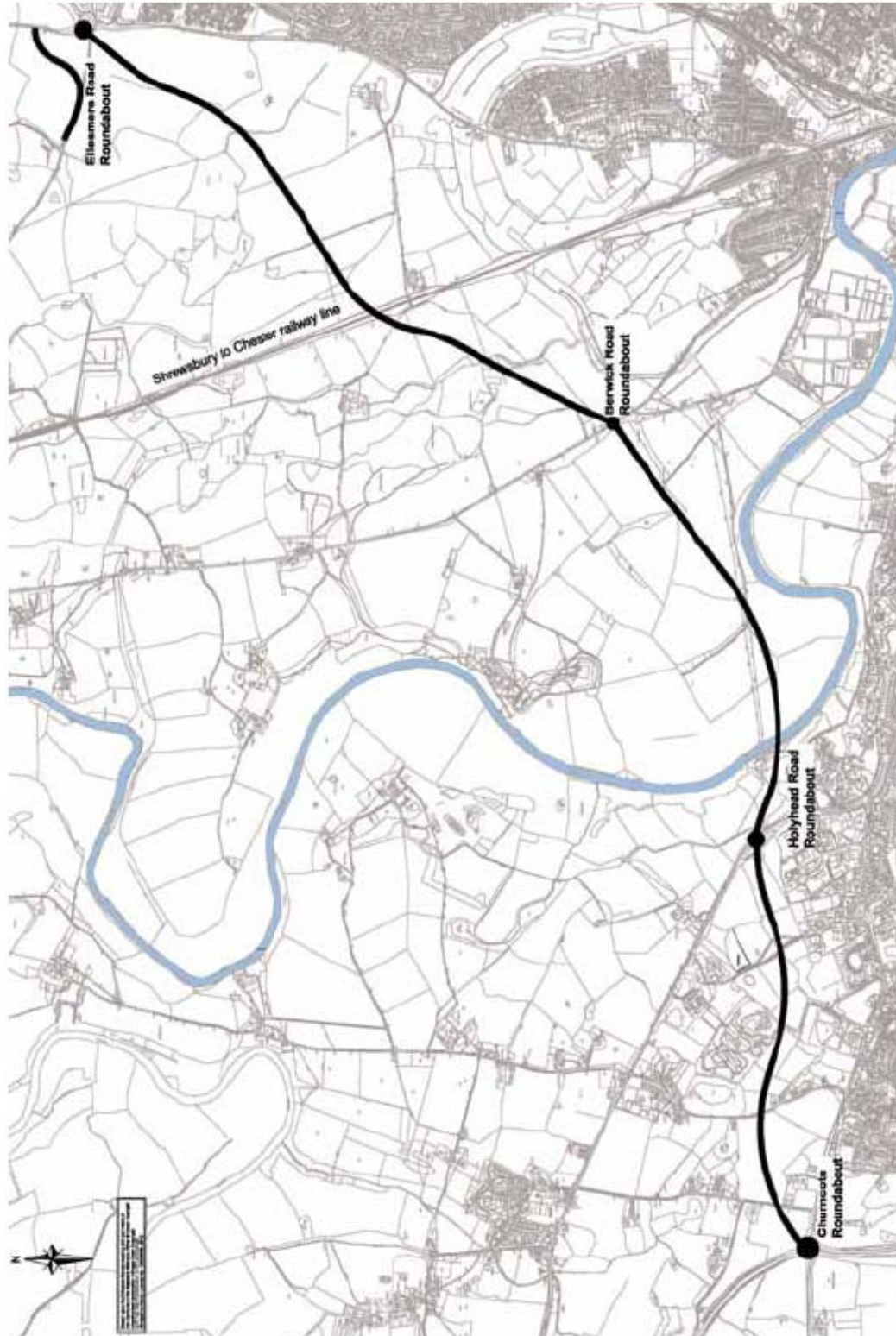
We will seek to enhance feelings of personal safety when travelling, particularly after dark.

This will be achieved through:

- Ensuring the design of new residential areas provides good surveillance for pedestrian and cycle routes.
- Reviewing high priority pedestrian routes to identify security improvements, including improvement to lighting, removal of dark pockets and concealed areas and possible introduction of CCTV.
- Work towards the provision of more secure car, motorcycle and cycle parking facilities in public places; and encourage safer parking behaviour.
- Consider further provision of CCTV at rail and bus stations and on buses.

Appendix 5 Shrewsbury North West Relief Road preferred route

Figure A4.1 Shrewsbury North West Relief Road preferred route



Appendix 6 Shrewsbury North West Relief Road assessment summary

Table A5.1 Detailed assessment of North West Relief Road preferred route

Do something	Description: Preferred route	Problems: congestion and associated issues in town centre	Present value cost £m	
OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE	ASSESSMENT
ENVIRONMENT	Noise	Introduces a new noise source for some properties in rural area but provides reduction in noise exposure for many more properties within the town where congestion and traffic noise levels are high.	Estimated population annoyed by noise in 2011 for do-min = 1199 Estimate population annoyed by noise in 2011 with scheme = 1075	Difference in population likely to be annoyed with scheme over do-minimum = -124
	Local air quality	While the scheme would lead to an increase in PM ₁₀ concentrations of greater than 1 µg/m ³ at 20 m from the centre of some of the links of the new road, concentrations remain below the AQS objective. Expected improved air quality in 2 existing AQMAs.	7572 properties experience improved air quality 2281 properties experience deterioration in air quality	Concs weighted for exposure: -510 PM ₁₀ -1303 NO ₂
	Greenhouse gases	CO ₂ emissions are expected to decrease by 2.0% with the scheme in 2011, due to an overall reduction in vehicle kilometres travelled across the road network.		-1986 tonnes of CO ₂
	Landscape	Results in disruption to landform and field patterns and severance of vegetation belts. River Severn crossing could be a positive feature. Visual impact on approximately 85 properties. Not possible to fully mitigate impacts.		Moderate to large adverse
	Townscape	Localised benefits from reduced traffic flow, providing increased potential for future enhancements. Some localised degradation from increased traffic flow.		Slight beneficial

	Heritage of historic resources	Loss of cropmarks on Berwick estate. Slight degradation in setting of Shrewsbury Castle and The Mount conservation area. Improvements to setting in areas of reduced traffic.		Large adverse
	Biodiversity	Passes mainly through areas of low ecological interest. However, very close to Hencott Pool Ramsar. Also, potential effects on veteran trees and badgers.		Significant adverse
	Water environment	Crosses the Severn near extraction point requiring relocation of facility. Traverses SPZ1. Minor impact on flood plain would be compensated. Could affect hydrology of Ramsar.		Large adverse
	Physical fitness	Some urban journeys by bicycle or on foot and some leisure walks may be deterred.		Worse
	Journey ambience	Would provide pleasant and sometimes dramatic views through open countryside. The simplicity of the route would reduce stress on travellers.		Better
SAFETY	Accidents			
	Security			
ECONOMY	Transport economic efficiency			
	Reliability			
	Wider economic impacts			
ACCESSIBILITY	Option values	n/a		Neutral
	Severance	Would sever a number of routes between Holyhead Road and Welshpool Road, and footpaths near urban edge.		Moderate negative
	Access to the transport system	n/a		Neutral
INTEGRATION	Transport interchange	n/a		Neutral

	Land-use policy	Likely to have both positive and negative effects on local development control policies.		Neutral
	Other Government policies	Fits well with economic and transport policies, less well with environmental policy.		Neutral