

**Swindon Local Transport Plan 3:  
2011-2026**  
**Main Strategy**  
**April 2011**

1	Introduction to Swindon and LTP3 .....	7
2	Local Transport Plans and the Policy Framework.....	11
3	Swindon Transport Strategy 2009.....	29
4	Challenges and issues .....	39
5	Spatial Planning .....	78
6	Implementing Key Goals .....	90
	Support Economic Growth .....	96
	Climate Change .....	112
	Safety, Security and Health .....	120
	Equality of opportunity. ....	127
	Quality of life .....	145
7	Option generation, appraisal and selection.....	153
8	The Final Strategy.....	183
9	Delivery and Finance .....	215
10	Targets and Indicators .....	240

	<b>Swindon's third Local Transport Plan</b>
	<b>Contents</b>
	Preface
Chapter 1	Setting the Scene
Chapter 2	Policy Framework
Chapter 3	Swindon Transport Strategy 2009
Chapter 4	Challenges and Issues
Chapter 5	Spatial Planning
Chapter 6	Implementing Key Goals <ul style="list-style-type: none"> <li>• Economy</li> <li>• Climate Change</li> <li>• Safety, Security and Health</li> <li>• Equality</li> <li>• Quality of Life</li> </ul>
Chapter 7	Option generation, appraisal and assessment
Chapter 8	Final Strategy
Chapter 9	Delivery and Finance
Chapter 10	Targets and Indicators
Supporting documents	Strategic Environmental Assessment Habitats Regulations Assessment Equality Impacts Assessment Health Impact Assessment
Supplementary Documents	Walking Cycling Public Transport Freight Road Safety Network Management Smarter Choices Parking Rural Areas
Associated Plans (existing)	Network Management Plan Transport Asset Management Plan Rights of Way Improvement Plan Sustainable Modes of Travel to School Strategy Strategic Plan for Accident Reduction

## **Swindon's third Local Transport Plan Preface**

Swindon's third Local Transport Plan has been prepared in accordance with the statutory guidance issued by the Department for Transport in July 2009. It comprises an over-arching strategy document and a separate implementation plan setting out the proposals for the delivery of the policies contained in the strategy.

In order to develop an effective strategy and decide priorities for implementation the following process was recommended.

- Clarify goals
- Specify the problems or challenges the authority wants to solve
- Generate options to resolve these challenges
- Appraise the options and predict the effects
- Select preferred options and decide priorities
- Deliver the agreed strategy

Chapter 1 sets the scene with a “pen picture” of Swindon.

Chapter 2 describes the Local Transport Plan process and sets out the national and local policy framework. It outlines the work carried out in the Swindon Transport Strategy and the Swindon DaSTS Study that feed into this Local Transport Plan.

Chapter 3 details the Swindon Transport Strategy which was adopted by the Borough Council in 2009 and which underpins Swindon's third Local Transport Plan.

Chapter 4 sets out the current social, economic, environmental, land use and transport situation in Swindon and describes the main transport related challenges and issues. It goes on to set out some of the future developments proposed for Swindon, and describes their likely transport implications, particularly where they could lead to future problems.

Chapter 5 sets out the spatial aspects of the Local Transport Plan in the context of the “Connecting People, Connecting Places” neighbourhood management strategy. It also describes sub-regional issues as they relate to neighbouring highway authorities and the Highways Agency.

Chapter 6 relates the national transport policy framework (the DaSTS Goals) to broader local policy objectives. It places the DaSTS Goals in a local context and assesses the degree to which they can be prioritised locally. Each of the five DaSTS Goals is then discussed in detail, setting out the main themes, and the strategies to address these themes.

Chapter 7 takes forward the transport related problems and issues identified in Chapter 4, and relates them to the national, regional and local policy framework. It identifies options for addressing these key challenges and

delivering the policy objectives. Options are sifted and appraised using the INTRA-SIM decision support tool.

Chapter 8 arrives at a Preferred Strategy and sets out the resulting LTP3 policies to address the transport challenges

Chapter 9 sets out the general principles for delivering the Local Transport Plan strategy. It sets out details of the available funding sources and the overall approach to delivering against the goals set out in earlier chapters.

Chapter 10 identifies proposals for targets and indicators that will be used for monitoring the success of the Local Transport Plan in delivering the identified key local goals and priorities.

The over arching Strategy document is supported with a number of supplementary documents covering specific transport topics. The supplementary documents can be reviewed and updated as appropriate during the term of the wider LTP.

#### Supplementary documents

- Walking
- Cycling
- Public Transport
- Freight
- Road safety
- Network Management
- Smarter Choices
- Parking
- Rural areas

In addition there are a number of existing plans and duties that are reflected in the LTP including the Network Management Plan, Transport Asset Management Plan and Rights of Way Improvement Plan

#### **Background**

Preparation of the Local Transport Plan started before the May 2010 general election and has continued throughout 2010 and early 2011 as the policies of the new government have emerged. Work on the Plan has continued against a changing and uncertain backdrop where significant reforms have been announced which will have a major impact on local transport policy. Reforms will see the removal of the previous system of regional planning, the Regional Spatial Strategy and Regional Funding Allocation. Until a new framework for local planning is agreed it has been necessary to continue work, using the best information available, in view of the fact that the Council still retains a statutory duty to have a new Local Transport Plan in place by April 2011.

Preparation of the Plan has also taken place against the backdrop of significant reductions in public finance. The first few years, at least, of this

Local Transport Plan period will be financially straightened times and this will shape what can be achieved. The implementation plan will be based around these new financial realities and practicalities, and the need to obtain even greater value for money from investments in the transport system.

The implementation plans will cover periods, that will align with the local government funding settlement periods, the first being 2011/2 to 2014/5. The implementation plan for this first period was expected to be the subject of consultation at the same time as the Strategy document. However the significant uncertainties over funding for this period and the fact that the results of the government's Comprehensive Spending Review were not announced in any detail until December 2010 meant that this was not feasible. It was therefore decided to produce:

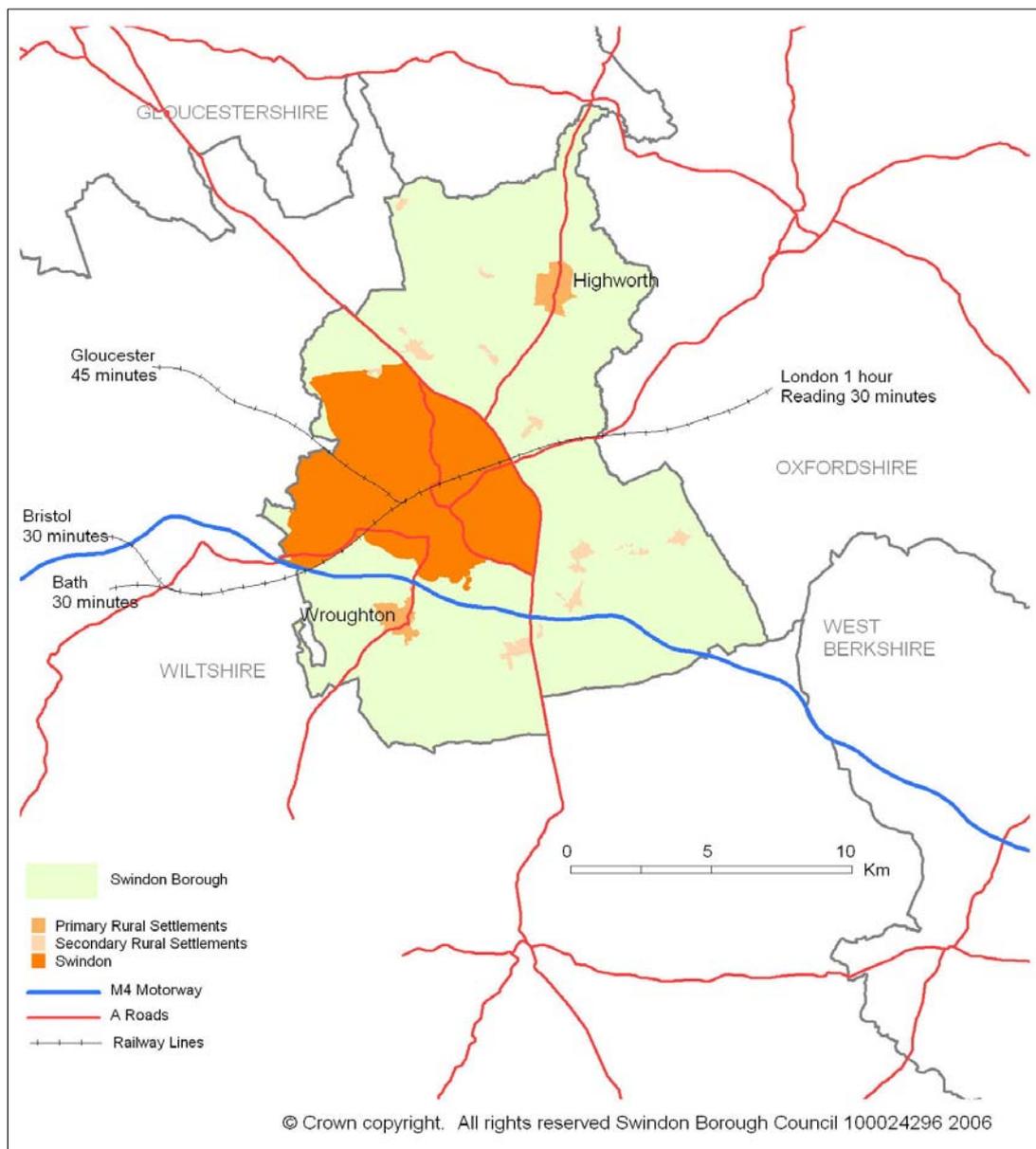
- A one year implementation plan 2011/12 to be published in March 2011
- An implementation plan for the remainder of the local authority funding settlement period to be published in autumn 2011.

In autumn 2011 it is also planned to carry out an early refresh of parts of the main LTP document – to update the chapters on indicators and targets in the light of the funding position and to update sections covering One Swindon and the Core Strategy – both of which have a significant impact on transport related priorities and are being developed during 2011.

# 1 Introduction to Swindon and LTP3

1.1 Swindon Borough Council is a Unitary Authority. It is situated in the north-east of the South-West Region. It is midway between Bristol, 40 miles to the west and Reading, 40 miles to the east. The administrative boundaries cover an area of approximately 230km<sup>2</sup> and it has a population of over 192,900 people, including about 168,900 in the urban area of Swindon. Its location has been key to its success. Its geographical location on the Great Western main line between London and Bristol resulted in significant growth during the “railway age”. More recently its location on the main M4 corridor, allowing easy access via the strategic road network to both London and the Thames valley as well as the west of England and South Wales, has been the main driver of its expansion. As a result more people work in the Borough than live in it, and Swindon Town Centre has a catchment area stretching well beyond the Borough boundaries.

Figure 1.1: Location of Swindon Borough within the sub-region and major transportation links



1.2 Swindon has transformed itself from a town dominated by the railway industry into one with a prosperous economy which is home to many international headquarters and high growth industries such as Intel, Zurich Financial Services, Intel and Honda. Other significant employers are WH Smith, BMW, Nationwide Building Society, RWE nPower, Arval, English Heritage, National Trust and a number of government Research Councils. In the post recession world Swindon will be very well positioned to accelerate its economic contribution, especially because of its well positioned geographical location and excellent transport links.

1.3 Swindon is a positive and highly ambitious town, which aims to develop its status as an economic, retail, and cultural centre. However, it is an area of contrasts. Whilst the Borough is economically prosperous there remain areas of social exclusion. Growth in the Borough has been characterised by large developments that have expanded the urban area in specific directions at certain periods of time. This has led to an increase in travel, especially by the private car, which has in turn led to a reduction in service provision for members of the community who do not have access to a car. The development of fast and convenient public transport has also lagged behind because of the relative ease of car use.

1.4 In addition, the town centre has not developed at a corresponding rate with the economy and is in urgent need of regeneration and new investment.

1.5 These issues present the Borough with significant challenges, particularly in the current economic climate, and there is a need to balance the provision of housing and jobs in Swindon to encourage more sustainable patterns of development through the reduction in overall levels of inward commuting.

1.6 The former draft Regional Spatial Strategy for the South West 2026 (RSS) underlined the role of Swindon as a regional economic driver. Economic forecasts were for approximately 32,000 additional jobs in the Swindon 'Travel to Work Area' (TTWA) by 2026. The RSS required significant housing growth at Swindon for the next twenty years; 36,000 dwellings in total, with an additional 1,200 dwellings in the remainder of the Borough.

1.7 These expectations are being re-assessed as a result of the removal of the regional tier of planning by the new government. Local decisions will now be made about future employment and housing numbers. However it is anticipated that Swindon will still be accommodating significant growth in the period to 2026 and beyond. This growth needs to be managed sustainably. In transport terms, significant interventions will be required to maintain choice and to support the additional number of houses and associated employment opportunities that are proposed for Swindon. Without intervention the transport system will progressively deteriorate.

1.8 Substantial progress has been achieved toward realising the plans for growth, but there is much more to be done. Regeneration of the central area, together with economic growth through the development of planned urban extensions; all supported through a focus on the regeneration of the deprived areas is needed to develop Swindon into a town that is a successful economic driver for the South West and the UK.

### **Town Centre Regeneration**

1.9 The highest priority for Swindon is the regeneration of the town centre. Although the recession has had a significant impact, with most schemes delayed, the regeneration of the town centre is continuing in the form of capital projects funded through a combination of both public and private sector funding. It is crucial for the long term development of Swindon that investment in the town centre continues. The town centre is the heart of Swindon and needs to offer facilities and an environment which match the aspirations of the residents and attract further funding.

1.10 The funding of essential new infrastructure will be the biggest challenge in delivering the successful regeneration of central Swindon. Major items of infrastructure include a new pedestrian bridge across the railway line to link the area north of the rail station to the town centre. This is vital to address the severance caused by the railway but is unlikely to be delivered through private sector contributions. A further transport related necessity is the new Bus Exchange at Union Square. Part of the development agreement for this area, a suitable high quality facility is likely to cost more than is available at this time.

1.11 Significant environmental improvements to the main pedestrianised shopping streets are well under way. Upgrading of the area in front of the rail station is also set to go ahead. To continue to raise the quality of our environment and improve the profile of the town centre to residents and visitor alike, a rolling programme of further public realm works across further priority streets and spaces is necessary.

### **Urban Extensions**

1.12 A range of services including health, education, police, community requirements and social care facilities are required along with significant items of infrastructure such as those relating to transport and utilities in delivering planned urban extensions. Capital investment will be required throughout the urban extensions, but the strategy is to ensure that the urban extensions are linked with existing communities and that Swindon has a regenerated town centre to support its growing population.

1.13 Critical transport improvements will be required to support both town centre regeneration and the development of all of Swindon's planned urban extensions including those at Wichelstowe , Commonhead , the Eastern Development Area (Eastern Villages), and Tadpole Farm.

1.14 Infrastructure investment from both the public and private sector will be necessary to bring forward all of the planned urban extensions for Swindon.

## **Transport**

1.15 Transport is a means to an end, rather than an end in itself. If managed properly it can act as an “enabler” to allow Swindon to achieve its wider aims and ambitions. On the other hand, if not planned and managed properly it can act as a significant restraint on these ambitions.

1.16 For these reasons the Swindon Local Transport Plan will have a significant impact on the whole Swindon community. This explains the concentration on developing appropriate policies and interventions over recent years through the Swindon Transport Strategy and DaSTS Transport Study.

1.17 Transport has historically been important to the growth and development of Swindon going back to the railway age. It is no less important today.

## 2 Local Transport Plans and the Policy Framework

*This chapter describes the Local Transport Plan process and sets out the national and local policy framework. It outlines the work carried out in the Swindon Transport Strategy and the Swindon DaSTS Study that feed into this Local Transport Plan.*

2.1 The Local Transport Plan (LTP) is the statutory document which contains the transport policies and programmes of the local transport authority. The legal basis for LTP3 is in Part 2 of the Local Transport Act (2008) which amends the Local Transport Act (2000). By April 2011 each local transport authority in England, outside London, must submit a new LTP, (LTP3), setting out its future transport strategy together with an implementation plan. The Department for Transport issued statutory guidance in July 2009 to support local transport authorities in producing their new LTP's.

2.2 Locally, work took place during 2008 and early 2009 to develop the "Swindon Transport Strategy" which was approved by Cabinet in July 2009 and has informed the draft "Swindon Core Strategy" and ongoing bids for central funding for specific transport schemes.

2.3 There is a dynamic relationship between the Local Development Framework process and the Local Transport Plan process. It has been described as a mutually reinforcing relationship. Each document informs and is informed by the other. The LTP is required to enable delivery of key schemes that support growth and regeneration. Without these schemes, development on the scale of that proposed in the Core Strategy would not be acceptable.

2.4 It is therefore appropriate that Swindon's third Local Transport Plan uses the recently prepared "Swindon Transport Strategy" as its core evidence base and that its objectives, principles and policies are tested against the LTP guidance and reinforced and expanded where necessary. The LTP will be the key delivery mechanism for the "Swindon Transport Strategy" and the LTP Implementation Plans will demonstrate the deliverability of the Strategy (a key test of soundness of the Core Strategy).

2.5 The Borough Council has decided to produce a strategy document for the period 2011 to 2026 to tie in with the timescale of the emerging Swindon Core Strategy. Implementation plans will then be produced to align with local government funding settlement periods (the first being four years from 2011/12 to 2014/15), and the Local Area Agreement timescale.

2.6 Local transport authorities are free to prepare LTPs jointly with other authorities, for example in adjacent areas to cover a wider journey to work area. However, such joint plans would need to cover the entire

administrative areas of all the authorities involved. Situated between much larger, mainly rural authorities (Wiltshire, Gloucestershire and Oxfordshire) it is not practical to submit a joint plan with one or more of these areas. A Swindon area only LTP has therefore been produced. There has, however, been consultation with adjoining authorities during the process.

2.7 The Borough Council has chosen to support its LTP3 with a number of supplementary documents covering areas such as parking, public transport, smarter choices etc. This ensures that the core document is concise and will allow the supplementary documents to be reviewed and updated as appropriate during the term of the LTP. The supplementary documents are focussed on the delivery of the overarching strategy objectives of the core document.

2.8 In addition there are a number of existing plans and duties that need to be reflected in the LTP including the Network Management Plan, Transport Asset Management Plan and Rights of Way Improvement Plan. These sit alongside the supplementary documents.

### **Strategic Policy Framework**

2.9 Local Transport Plans need to reflect the impacts of the “Stern Review into the Economics of Climate Change” (2006) and the “Eddington Transport Study” (2006). These have influenced the Department for Transport’s “Towards a Sustainable Transport System” (2007) and “Delivering a Sustainable Transport System” (DaSTS) (2008). DaSTS is now the key policy document informing national, regional and local transport strategies and investment decisions. DaSTS sets out five national goals for transport:

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

2.10 LTP’s need to show how local policies and plans will contribute to these goals, prioritising and refining the goals to reflect local circumstances. They can also add local objectives, (where they do not conflict or undermine the national goals for transport). Authorities must demonstrate that the strategies set out in their LTP’s are clearly based on their goals and priorities. The LTP3 guidance emphasises the need to include an appraisal of options with reference to the DaSTS goals.

## **Alignment with Regional Strategies**

2.11 The LTP3 guidance document made reference to the need to integrate the LTP with the policies and objectives of the Integrated Regional Strategy (IRS) 2004-2026 and the emerging Regional Spatial Strategy (RSS) 2006-2026 which includes the Regional Transport Strategy. Following the general election the new government announced its intention to abolish the regional tier of planning and the draft Regional Spatial Strategies. As a consequence Swindon's LTP does not cross reference its policies and objectives to any regional framework.

## **Alignment with local strategies**

2.12 The Local Transport Plan is just one of a number of strategic policy and planning documents for the local area. Local Transport Plan policies should align with other areas such as education, employment, environment and health. It will influence, and be influenced by the Local Development Framework, the Sustainable Community Strategy and 'One Swindon'.

2.13 The Local Strategic Partnership (LSP) is responsible for the Sustainable Community Strategy and for the Local Area Agreement. The Sustainable Community Strategy is a high level, overarching strategy that outlines the vision for improving the social, environmental and economic well-being of the area. The strategy for Swindon is set out in "A Shared Vision for Swindon 2008-2030". It informs a series of other documents delivered by a multitude of organisations. One of the key delivery mechanisms for this Vision is the Local Area Agreement (LAA).

2.14 Six key themes were identified in the Vision and these will be reflected in the local policy goals of LTP3.

- Theme 1 – is Swindon as 'destination of choice' and has the objective of making Swindon a national icon for growth on a sustainable basis;
- Theme 2 – maximises the benefits to all Swindon people from a growing local economy, with a particular focus on technology, noting that investment in transport technology and the benefits that could be accrued from easier communications will need to be part of this;
- Theme 3 – concerns the safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling;
- Theme 4 – is 'a healthy, caring and supportive community' that recognises provision of services and facilities, and accessibility to them;
- Theme 5 - where high aspirations are supported by superb education provision for all ages', linking to the need for a skilled workforce and maximising benefits for all in a growing and high tech economy; and
- Theme 6 – looks at local safety and where people can have real influence (in particular in relation to reducing road accidents).

2.15 The new government has decided to end the system of central monitoring and performance management of local authorities through the Audit Commission and the Comprehensive Area Assessment process. This will be replaced by the concept of “localism” by which local authorities will set indicators and targets that are appropriate for local circumstances and be answerable to the local community for their performance rather than to central government. The full details of how this new system will operate are awaited (February 2011).

2.16 The LTP sets out the connections between the wider local priorities that have been decided and the policies and programmes set out in the plan, along with the indicators and targets that will demonstrate successful delivery.

### **One Swindon**

2.17 One Swindon is about making significant progress on aligning the shared resources of public sector partners alongside the resources and involvement of the voluntary and community sector and local people to achieve shared outcomes for the people of the Borough of Swindon.

2.18 Within the context of the Community Strategy One Swindon is a critical piece of business planning between Swindon Borough Council and partners that sets the strategic direction for Swindon over a four year period (2011-2015). It will create a single plan for Swindon developed by all key delivery partners (health, police etc.) One Swindon embodies the way things work in Swindon – through integrated partnership working. Swindon has a series of joint appointments at senior officer level particularly in housing and healthcare. One Swindon is taking partner relationship one step further by creating a single plan for Swindon the place, offering a sharper focus on priorities behind which the Council and its partners will align their collective resources. One Swindon will provide a challenge to come up with innovative and creative solutions to improve outcomes for Swindon’s people, with far fewer resources, and increasing demands for our services. It seeks to build a more effective relationship between our partners in the public sector and between our communities, with improved resource and planning alignment.

2.19 Based on extensive work with public sector partners and consultation engagement with local people over a period of two years the following four areas have emerged as priorities for One Swindon.

- We can all benefit from a growing economy and a better town centre
- I like where I live
- Everyone is enjoying sports, leisure and cultural opportunities
- Living independently, protected from harm, leading healthy lives and making a positive contribution

2.20 In light of the pressure on public sector budgets and increasing demand it has never been more important to be able to prioritise, invest and work together effectively. No single organisation can continue to deliver services in the way that they are delivered currently. One Swindon will bring

clarity of focus on key outcomes for the Borough. It will strive to ensure that services are more sensitive to local needs and issues and that people know exactly what services are available and how they can access them. It will also improve how services are connected or related alongside promoting more local involvement in how services are developed and delivered. The responsibility for the delivery of One Swindon will be shared by the member organisations of the One Swindon Partnership Board and the people of Swindon.

2.21 Work on the development of One Swindon has achieved agreement on four principles that are essential for the successful delivery of One Swindon and apply to all organisations and individuals making a contribution and support the Council to fulfil its community leadership role. The four principles are

- **Local and Lasting** – We will focus on local and lasting benefits for communities and organisations in Swindon. We will ensure that long-term implications are fully considered in our local decision-making. We will encourage local people to get involved in decisions affecting their lives, to make the most of the opportunities available to them, and to help themselves, so they in turn can contribute to the place they live.
- **Stronger Together** - Working closely together, improving communication and connectivity will help us all in making better use of the resources, facilities, relationships and partnerships that we have to achieve more effective and lasting outcomes for all.
- **Prioritisation & Leadership** – One Swindon sets out our shared priorities and delivery will require clear prioritisation and leadership in its widest sense. Collectively we need to be committed to our priorities and follow through on delivery, disciplined about how we use resources and honest at all times about the scale of the challenge. The Council at times will need to be successful in showing positive community leadership and in so doing, support and strengthening local community interest and participation.
- **Trust & Bravery** – One Swindon signals our readiness for change. We know that bringing this about will require bravery alongside a shared and sustained commitment. Together as individuals, communities and organisations we will need to trust each other and create a common purpose and shared endeavour.

Each of One Swindon's four priorities has a set of outcomes to achieve its delivery. These are listed below each priority. There are specific commitments that will deliver each of the One Swindon outcomes and form a One Swindon Delivery Plan. The transport related commitments are also listed below under the appropriate outcomes.

#### **Priority - We can all benefit from a growing economy and a better town centre**

2.22 We are committed to building on Swindon's proud history of economic success by encouraging our economy to grow. Attracting more

investment and creating more jobs will benefit more people in Swindon. A growing economy will also help us achieve a better town centre as well as high quality houses, roads, shops and other facilities across our towns and villages.

2.23 Swindon's future economic success depends upon a balanced and vibrant economy in which the welcome presence of large multi-national companies is complemented by thriving local enterprises. We are therefore committed to working closely with businesses to identify and respond to their needs, overcome barriers to investment and encourage more businesses of different types and sizes to set up or expand in our towns and villages.

2.24 We want to see all the people of Swindon contributing to and benefiting from our growing economy. That is why we want to encourage as many people as possible to be part of a Swindon workforce that is both skilled and adaptable. We will also continue to encourage a range of employment opportunities, whilst paying particular attention to ensuring more people in the Swindon workforce are highly skilled.

2.25 To achieve this we will encourage education providers and businesses to work closely together to ensure that Swindon's education and training offer helps people to develop the skills necessary to meet the needs of local businesses and secure jobs now and in the future. We will pay particular attention to helping our young people find clear paths into education, training and work by continuing to improve the education attainment levels in our schools.

2.26 We continue to support the regeneration of Swindon's town centre because we believe it needs to offer more to become a place where more people choose to live, visit, shop and enjoy their spare time. That is why we are committed to continuing with the visible signs of regeneration and renewal.

2.27 Over the next four years we will work together to focus on the following four outcomes, which will help us all benefit from a growing economy and a better town centre:

- More jobs are being created for more local people by more businesses of different types and sizes choosing to set up, invest and expand in Swindon
- People in Swindon have the right education and skills to compete successfully for job opportunities in our towns and villages
- Swindon's growing economy will benefit existing communities and businesses
- There will be further significant and visible improvements to our Town Centre

2.28 Transport Challenges

- Access to training and education means locally delivered services or a need to travel. Those without access to a car will need to access

training and education by walking, cycling and public transport or miss out.

- Growth and town centre regeneration will benefit from maximising the efficiency of the existing transport network in order to reduce the need for new infrastructure (with associated developer costs)
- Encouraging use of public transport, walking and cycling may also reduce the need for new infrastructure (with associated developer costs)

2.29 For this priority area the following specific, transport related commitments have been proposed.

<b>Outcome: Swindon’s growing economy will benefit existing communities and businesses</b>
We will review public transport provision to ensure that it meets as wide a range of users needs as possible. In particular we will work with operators to provide choice for different users to reduce the need to use a car
We will champion the Kemble to Swindon rail line upgrade, the Crossrail project and the Great western mainline electrification
<b>Outcome: There will be further, significant and visible improvements to our town centre</b>
We will promote a safe and pleasant town centre experience during the day and night for all people
We will build a new bus station
We will make further improvements to the town centre public realm, including the station forecourt

**Priority - I like where I live**

2.30 We know that local people want to be proud of where they live and that the condition of streets, roads, parks and open spaces is important to them. Through One Swindon, we will be working with local communities to tackle their important issues such as litter, graffiti, dog bins, re-cycling, and their local environment to help create neighbourhoods in which they are proud to live and work. If we all make a contribution we can reduce the current costs of maintaining the local environment.

2.31 Swindon has many public spaces that are used regularly by local people and visitors. These facilities provide spaces to take part in events, sports and leisure activities and to feel that Swindon is a good place to be. Beautiful parks have a powerful impact on our quality of life and we will commit to continue to invest in our parks and encourage more use through working closely with our residents to find innovative ways to protect and improve these spaces for the future.

2.32 We want Swindon to be a place where everyone can enjoy being out and about. Swindon is a low crime area and we want to keep it this way. Working to reduce re-offending, building a strong sense of community,

promoting positive activities for young people are some of the ways we will work together to target the pockets of anti social behaviour or crime.

2.33 Well-maintained streets and Town Centre improve the image of Swindon to people visiting and working here, which is important for the local economy. We will focus on creating a positive impression of our town and villages for visitors and residents, and, will work to keep our major roads safe and in good order.

2.34 Over the next four years we will work together to focus on the following four outcomes, which will help us all like where we live

- More people are proud of their neighbourhood
- Working together; people feel that crime and anti social behaviour is being tackled
- Working together; our beautiful parks will be improved and maintained
- People coming to Swindon have a good impression of our Town and villages
- There will be targeted improvements of our roads

2.35 Transport Challenges

- Recent severe weather has had an impact on the condition on the highway network placing further strain on maintenance budgets.
- Fear of crime and anti social behaviour on the transport network may be as big a limitation on personal mobility as actual crime itself.
- Crime impacts disproportionately on certain areas and certain social and ethnic groups, raising issues around equality.
- Heavy traffic flows, congestion and large numbers of goods vehicles cause pollution on and around streets and impact on the adjacent green spaces both within urban areas and in the countryside.

2.36 For this priority area the following specific, transport related commitments have been proposed.

<b>Outcome: More people are proud of their neighbourhood</b>
We will work with the community to introduce a new StreetSmart model, which will allow people to have much more of a say in what happens in their neighbourhood
<b>Outcome: People coming to Swindon have a good impression of our Town and villages</b>
We will commit to ensuring our gateways and main routes into Swindon and villages are well sign-posted and well maintained
<b>Outcome: There will be targeted improvements of our roads</b>
We will endeavour to keep our roads safe, working to reduce accidents and raise awareness of road safety in schools
We will focus on keeping main roads in good order

**Priority - Everyone is enjoying sports, leisure and cultural opportunities**

2.37 Ensuring everyone can enjoy and participate in a wide variety of sports, leisure and cultural activities is important to Swindon. It builds pride and has significant health, social and economic benefits. Sport, leisure and cultural opportunities can offer a positive and rewarding experience to the most vulnerable individuals in our society; reducing stress, depression, anxiety, the need for medication, improve blood pressure and reduce pain. Ensuring everyone can enjoy and participate in this wide variety of sports, leisure and cultural activities is important to Swindon.

2.38 To keep delivering good quality sports and leisure services in Swindon we need to look to the future and think about how we can meet local needs, improve and develop our local facilities and bring in new opportunities.

2.39 Having a large venue that can seat thousands of people is something lots of people would like to see in Swindon. This could be an improvement to an existing facility or a newly built project.

2.40 It's not all about what the Council provides. Local clubs, groups and societies are busy across Swindon regularly delivering sports, leisure and culture activities. Together this means that Swindon people have access to an annual events and activities programme that is inspirational and accessible. One Swindon will help us recognise and grow more of this community involvement, and, improved communication, information and use of technologies will help us tell everyone about the full range of activities and events that are on offer in the Borough.

2.41 Through One Swindon, we will make sure the future of important facilities are secured for the benefit of local people. We will use One Swindon to help us look at alternative ways of managing venues and delivering activities for local people. We want to do more together so when people want to get involved we will help and do our best not to get in the way. We will support local groups be active in their communities, and help people access training and advice. We will work closely with local groups to help people who don't find it easy to take part to feel more confident and more likely to get involved or try something new.

2.42 Over the next four years we will work together to focus on the following three outcomes, which will help everyone enjoy sports, leisure and cultural opportunities:

- Improve health and wellbeing for all by increasing and widening participation in sports, leisure and culture
- Swindon is a preferred destination of choice for sports, leisure and culture
- More young people are supported to take part in sports, leisure and culture

2.43 Transport Challenges

- Access to sport, leisure and culture includes the availability of transport to those facilities.
- Potential centralisation of sports facilities at specialist sites may create access issues.
- Some locations away from the town centre are difficult to access by those without access to a car particularly at night and on Sundays.
- Some town centre locations have limited or poor quality parking facilities

2.44 For this priority area the following specific, transport related commitments have been proposed.

<b>Outcome: Improve health and well-being for all by increasing and widening participation in sports, leisure and culture</b>
Get more people, more active, more often, with targeted support for people with disabilities and children at risk of obesity

**Priority - Living independently, protected from harm, leading healthy lives and making a positive contribution**

2.45 Feeling valued, respected and safe is important to all of us no matter what our background or age. Most of us will gain this from our lives at work or at home and, as a result will enjoy healthy and satisfying lives. However there may be times when personal circumstances are such that this may not be the case for us or someone we know. This might be the experience losing a job, a home, the breakdown of family support, domestic abuse or becoming ill and needing to rely on extra care. This kind of event or experience can be devastating and we will all cope with it differently.

2.46 Helping and responding when people need protection or support is where the greatest proportion of public money gets spent. Budgets are shrinking and people’s lives are more pressured and complex than in times past. We know that some of the traditional ways we have assisted people have not really helped them to live more independently or encouraged them to feel like they can make a positive contribution. Many people need support, whether this is more long term or for shorter, more intensive periods. We know there are many ways in which people can be helped sooner, or in better ways which are more cost effective and ultimately lead to better outcomes.

2.47 A system that is predominantly based on intervention and service provision locks us into a constrained process that is predicated on waiting for something to become a problem so we then step in with a professional view or service. For example alcohol related health issues cost the public sector in Swindon over £60 million pounds a year. If we can look at different interventions and influences so there are even 10% fewer people arriving at hospitals or surgeries as a ‘problem’ to be treated, then we can unlock over £6 million pounds worth of resources.

2.48 We want people in Swindon to be able to make positive choices throughout their lives. In reality, many people, particularly at a time of crisis, find it difficult to understand where and when to go for support. We also know that lots of people rely on their friends, family and neighbours for help, advice and support. This is an often overlooked, but essential part of the support network that exists alongside agencies and organisations.

2.49 We want all children and young people to have stable family lives and to be protected from abuse. We will work with families to try to make them more resilient in order to prevent family breakdown and try and help them work together to protect children at risk of harm. We will attempt to provide stable placements for all children in care who are not able to live with their families and give them the opportunity to succeed and become successful adults

2.50 One Swindon is an opportunity for all agencies in Swindon to work much more closely together while recognising and growing the enormous contribution that we can all make to the lives of individuals and communities. Enabling rather than delivering is the key. Participants in rather than consumers of is the shift we need to make. It is all about the making sure people get the right response at the right time (from whomever that may be), not necessarily the right service at the right time.

2.51 There are always opportunities for people to make a positive contribution either within their families, their neighbourhoods or in the wider community. Making a positive contribution can help everyone feel a valued member of his or her community. We can all play a more active role in 'looking out' for our neighbours and helping out where we live. This is more likely to help people to cope better with the challenges they face and help us all create a greater sense of community. The decision though remains very much down to the individual.

2.52 One Swindon in essence is about creating an environment for an invitation to participate and contribute but that invitation does not come from the Council, public sector or from any particular agency or organisation. The invitation exists in the places we live and in the people around us; we just need to be open to it. We can work better together and deliver the following three outcomes:-

- Increased community involvement so that everyone is able to make a positive contribution
- More people feel in control at times of crisis, are protected from abuse and family breakdown and are more resilient and more able to regain their independence
- People in need are benefiting from joined up services that are easy to access

2.53 Transport challenges

- Access to essential support and services will often depend on availability and affordability of transport.
- Vulnerable groups may be less likely to have access to a car.
- Road casualties are often higher amongst vulnerable groups – especially child pedestrians.
- Centralisation of services/loss of local and neighbourhood provision puts more pressure on transport needs of vulnerable groups without car access.

2.54 Leading up to the adoption of One Swindon at the Council Cabinet meeting in March 2011, partners will work together to agree the detail of the specific commitments that will deliver the One Swindon outcomes in the form of a One Swindon Delivery Plan, which will be presented to Cabinet for approval. At that time approval for a One Swindon performance framework will also be sought.

2.55 Thereafter, and subject to Cabinet approval, One Swindon will be published and the focus will shift to securing all of the outcomes that we have agreed over the next four years. To ensure local flexibility One Swindon will be subject to an annual evaluation to be reported to all partner organisations with options to refresh or amend the detail.

### **Sustainable Transport**

2.56 An essential component of the delivery of regeneration and growth is ensuring that measures are taken which are as sustainable as possible. In order to facilitate the regeneration and economic growth of Swindon, particularly in the town centre, a sustainable, efficient and responsive transport system is required. A successfully regenerated town centre will also provide the critical mass necessary to sustain a comprehensive public transport system.

2.57 The expected growth of Swindon provides an opportunity to develop a transport system that encourages and enables residents to become less reliant on cars. Improved car parking management, improved public transport, highway optimisation, travel plans, provision of enhanced walking and cycling facilities and car clubs and car sharing will make Swindon a more attractive centre for business, residents and visitors alike. The Local Transport Plan will be the delivery mechanism for many of the transport interventions set out across the four themed areas of One Swindon, but particularly the theme based around a growing economy and improved town centre.

### **Swindon Transport Strategy**

2.58 In June 2008 the Council, with its strategic partners the HCA and SWRDA, commissioned WSP Consultants to prepare a Swindon Transport Strategy. The purpose was to provide a comprehensive understanding of the transport interventions required to facilitate and support sustainable growth in Swindon, and in doing so, to inform the Core Strategy and LTP3. It included

extensive investigation, consultation, modelling, option assessment and appraisal.

2.59 Three objectives were agreed with key stakeholders in order to guide development of the strategy –

- Deliver a vibrant local economy.
- Improve the sense of place.
- Reduce the need to travel.

2.60 A number of principles were also agreed to guide the development of the strategy –

- Encourage short distance trips by walking and cycling.
- Encourage journeys into the town centre.
- Encourage journeys around but within Swindon; and
- Provide good access to the strategic road network

2.61 From these objectives and principles a number of goals were identified –

- Reduce the need to travel.
- Provide a town centre that is attractive to shoppers.
- Improve pedestrian and cycle permeability.
- Provide flexible transport for all, enabling choice for travel demand.
- Improve choice and reduce dependence on use of the car.
- Capture trips that currently “leak” from the town.
- Improve connectivity of movements around Swindon.
- Encourage long distance journeys by rail.

2.62 The Strategy was approved by Cabinet in July 2009 and has informed the draft Swindon Core Strategy “Proposed Submission Document” (2011).

2.63 The LTP will need to align with the “Swindon Transport Strategy” (and, by implication the Core Strategy). The LTP will use the “Swindon Transport Strategy” as its core evidence base testing its objectives, principles and policies against the requirements of the LTP guidance and reinforcing and expanding where necessary. The LTP will be the key delivery mechanism for the “Swindon Transport Strategy” and the LTP Implementation Plans will demonstrate the deliverability of the Core Strategy.

2.64 Throughout the process the approved “Swindon Transport Strategy” formed the evidence base which is the foundation of the LTP3 Strategy document and the associated Implementation Plan. The “Swindon Transport Strategy” has been tested against the key requirements for the preparation of LTP3 as set out in the statutory guidance. As the “Swindon Transport Strategy” work was largely completed before DaSTS was published it was not able to include a thorough analysis in the way expected by the LTP guidance.

Public consultation has therefore taken place around local prioritisation and refinement of the DaSTS goals. Where further additional evidence, consultation or consideration is required then this has been undertaken.

2.65 The Council could have opted to set aside the recently approved “Swindon Transport Strategy” (July 2009) and start the process from a blank sheet of paper. This however ignores the fact that the results of the “Swindon Transport Strategy” have fed directly into the Core Strategy which is now at an advanced stage of preparation. It also ignores the significant investment in officer and Member time that has been made in producing the document (with associated costs) and the substantial public consultation that was involved in its production. These aspects could not be lightly set aside.

2.66 The Local Transport Plan Strategy document sets out the policy background for establishing the transport spending priorities of the Council to 2026. The implementation plans will set out the funding sources for the identified scheme priorities. The LTP does not necessarily commit the Council itself to funding proposals contained within it. This will largely be dependent on the outcome of the funding settlements from central government and the availability of developer contributions and other grants and awards. It will serve as an important policy document to help the Council seek external funding and focus its spending.

## **Delivering a Sustainable Transport System (DaSTS) Swindon’s DaSTS Study**

### **Developing DaSTS**

2.67 The Department for Transport’s (DfT) White Paper ‘Towards a Sustainable Transport System’ (TaSTS, October 2007) set out the government’s response to ‘The Eddington Transport Study’ and ‘Stern Review of the Economics of Climate Change’. It also set out policy and investment plans for the period to 2013-14 and proposed a new approach to longer-term transport strategy, based on recommendations in the Eddington report.

2.68 Following on from this, a series of documents set out the DfT’s developing ideas on this longer-term approach, culminating with the release of the ‘Delivering a Sustainable Transport System: Main Report’ (DaSTS) in November 2008. This explained how the DfT envisaged putting the new approach into practice, in both tackling current problems and shaping the system to meet longer-term challenges.

### **The Main Report**

2.69 The DaSTS Main Report is realistic in aspiration, and acknowledges the difficulties and uncertainties of planning over the longer-term. The approach to uncertainty is pragmatic, seeking to tackle immediate priorities, but in ways that are consistent with meeting longer-term goals for transport and are commensurate with available resources.

2.70 The five goals for transport set out in the DaSTS Main Report suggest that the transport system should:

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

2.71 The goals are not specific to a time period, but should apply in building a sustainable society. In effect therefore, DaSTS is not about transport per se, as transport as a derived demand is a means to an end, rather than an end in itself. As such, there is a need to understand transport as an 'opportunity' or as an 'inhibitor' in delivering the DaSTS goals.

2.72 It is clear that there is the potential for tensions between the goals. For instance, in the DaSTS Main Report, the DfT notes that while it expects to make progress against all five goals, they acknowledged potential tension between goals, in particular that supporting economic growth and reducing greenhouse gas emissions in parallel could be challenging, at least in the short term. Tackling climate change and growth together is cited as the biggest challenge, although the goals have not been directly prioritised.

2.73 This is also due to the varying contribution transport could have in achieving the goals in different areas and under different circumstances. Despite this, the DaSTS Main Report suggests that "transport's role in support of the economy underpins many of the things we regard as important to our quality of life and that without a strong economy all the other goals will be much more difficult to achieve".

### **DaSTS in practice**

2.74 The key priority in the shorter-term (to 2014) is identified as "making better use of the existing network, combined with a targeted programme of improvements to improve capacity, reliability and safety in the most congested areas". In the longer-term, although mindful of funding constraints, DaSTS is aiming to make progress towards its goals despite the current economic climate; "we are planning today so that our transport infrastructure supports economic growth and for more ambitious emissions reduction, while at the same time looking for ways in which transport can contribute towards improved health, greater equality of opportunity and better quality of life and enhancement of the natural environment".

2.75 As part of developing DaSTS, the DfT provided the opportunity for the regions of England (outside London) to identify a series of transport studies. The aim of these studies is to better reflect the transport goals identified as part of the Government's on-going policy of sustainable transport in DaSTS, and was set out in 'Guidance to the Regions on Delivering a Sustainable Transport System' (April 2009).

2.76 Interventions identified in the studies need to support the DaSTS goals, in particular the sustainable economic and social development of the region, whilst taking account of the need to meet environmental requirements, in particular related to carbon dioxide (CO<sub>2</sub>) emissions. The guidance also emphasised the importance of aligning with wider regional strategies for economic development and land-use, and building on progress made through developing Regional Funding Advice and Regional Transport Strategies

### **South West DaSTS Study**

2.77 As part of the response to this, the South West Regional Partners 'DaSTS Stage 1 Study' (June 2009) examined the strength of the existing regional evidence base and identified the most urgent challenges for the towns and cities, and the regional network.

2.78 The study provided an interpretation of the DaSTS goals in the context of the South West region, and furthermore as challenges to be addressed through a two year DaSTS study programme. For instance, the regional study placed economic growth and climate change ahead of the other three DaSTS goals as regional priorities. The study outlined further studies that were considered necessary in the South West.

2.79 Overall 'gaps' were identified in the regional evidence base, which were judged to not have been fully addressed by Regional Funding Allocation advice (RFA2). The gaps were:

- A consistent baseline for measuring transport emissions across the region;
- The profile of emissions reduction needed from the region to contribute to national carbon budgets for the next five years, to 2020 and 2050;
- Procedures for monitoring progress;
- An understanding of the implications of different land use and transport strategy options to use as the basis for decision making; and
- Best practice in selecting options to encourage modal shift and the potential impacts that this can have on carbon reduction. This might include options to widen the toolkit of demand management measures and information technology, as well as changes in working patterns and changing travel behaviour.

2.80 Specific gaps were also identified in the context of Swindon. These were:

- Further work is required to take forward the key elements of the high level strategy (the Swindon Transport Strategy – see next section) alongside the development of a delivery framework that will maximise modal shift. DaSTS, the study suggested, is to take forward options to achieve a step change in public transport leading to the development of feasibility studies.
- The most urgent gaps are the development of cross modal options on key corridors (leading to a step change in public transport) and options in the Town Centre to complement other investment programmes and minimise the impact of growth on the national and regional strategic network.

2.81 The Study therefore made four over-arching proposals for a DaSTS study work programme to consider in Swindon. These were:

- Developing options for a step change in public transport on high density corridors, including town centre access;
- Developing options for improved interchange across modes and for access to the strategic network;
- Investigating synergies between transport planning and development of new vehicle technologies; and
- Explore and develop the potential for reductions in carbon emissions

2.82 The DfT subsequently approved a programme of six studies in the South West, including the DaSTS Swindon Transport Study.

### **The DaSTS Swindon Transport Study**

2.83 The aim of this study is to... “develop a transport strategy for the town that identifies the transport policies and interventions required to 2026, deliverable within a sustainable development framework. This will require the study to assess the impacts of growth and planned economic regeneration on the strategic and local networks in and around Swindon. The study will also develop options and packages of measures aimed at ensuring the transport network best supports the regeneration and economic potential of Swindon town centre and planned housing growth in the Swindon area.”

2.84 The study is being carried out in the overall context of delivery and goals of the wide range of other related strategies in Swindon, in particular where these relate to the DaSTS goals.

2.85 In considering the objectives and wider DaSTS goals, guidance from the DfT requires that the options and emerging strategy should be based on what might be achieved within reduced funding levels.

### **Study Objectives**

2.86 The ‘programme specification’ for the ‘DaSTS Swindon Transport Strategy Study’, issued by South West Councils and Swindon Borough

Council, sets a series of six broad objectives for the study. The six objectives are to:

- Develop the understanding of the role of transport in helping to deliver sustainable growth in Swindon;
- Establish the impact of the planned housing growth and regeneration programmes in the Swindon area on the performance of the key transport corridors connecting these areas both internally and externally;
- Develop proposals for managing travel demand and making best use of the transport system that maximises the performance of the strategic national corridor and the local network within the study area and its hinterland, including the identification of the role that smarter choices initiatives and other sustainable transport measures can play;
- Identify the scope for reducing the need to travel and promoting sustainable choices within the locational decisions on new housing and employment sites. This will include consideration of the relative impacts and benefits of various development scenarios within the locations of major housing and employment areas;
- Identify options and determine effective and value for money solutions that address the economic regeneration, accessibility, and housing growth challenges; support regeneration initiatives in Swindon town centre; encourage sustainable travel; minimise the level of carbon emissions; and are deliverable within the likely available resources.
- Enable a deliverable transport strategy to be produced reflecting the conclusions of the study that can be incorporated within Swindon's Local Transport Plan and into appropriate local and regional development plans supporting the sustainable development of Strategically Significant Cities and Towns defined in the South West Regional Spatial Strategy.

2.87 A key initiative informing the 'DaSTS Swindon Transport Strategy Study' is the 'Swindon Transport Strategy' (WSP, 2009). The main aim of this strategy was to provide key inputs to the emerging Local Development Framework (LDF) Core Strategy for Swindon. As such, it included extensive investigation, consultation, modelling, option assessment and appraisal. The DaSTS Swindon Transport Strategy Study draws heavily on the various technical notes and reports produced by WSP as part of developing the Swindon Transport Strategy, which was finalised in May 2009<sup>1</sup>

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<sup>1</sup> 'Swindon Transport Strategy', WSP: Final Report May'09, Issues Report Dec'08, Modelling Report Dec'08, Consultation Report Aug'08, Technical Notes Jun'08-Jan'09

### **3 Swindon Transport Strategy 2009**

*This chapter details the Swindon Transport Strategy which was adopted by the Borough Council in 2009 and which underpins Swindon's third Local Transport Plan.*

#### **Introduction**

3.1 Swindon Borough Council, together with English Partnerships (now the Homes and Communities Agency, HCA) commissioned consultants WSP to undertake a strategic transport study for the Borough of Swindon in June 2008.

3.2 The primary purpose of the commission, which was funded by the HCA, was to provide a comprehensive understanding of the transport interventions required to facilitate and support sustainable growth in the Borough in the next 20 years. The study does not review any land allocations or undertake the detailed design of any of the schemes proposed. In this context, the study has a key role in supporting the development of the Swindon Borough Core Strategy. The purpose of the Core Strategy is to set out the Borough Council's long-term vision for Swindon and establish the spatial policies required to deliver that vision in the context of the national and regional planning agenda.

3.3 The work undertaken by WSP has reviewed and evaluated current transport trends in Swindon, and assessed the implications of potential growth to 2026.

3.4 Consultation was undertaken with local stakeholders and a Project Board – the Master Planning and Transport Strategy Board (MATS) - was established to oversee the project. This comprised senior officers and the appropriate Lead Member from Swindon Borough Council as well as representatives of English Partnerships and the South West Regional Development Agency.

3.5 The final draft of the Swindon Transport Strategy (the outcome of the study), which was completed by WSP in May 2009, sets the 'direction of travel' for transport in Swindon over the next 20 years and is supported by a series of 'Technical Notes'.

3.6 The Transport Strategy has been informed by policy, guidance and best practice at the national, regional and local level. This includes for example, relevant Planning Policy Statements and Guidance Notes, the South West Regional Spatial Strategy, the Community Strategy, the Local Area Agreement (LAA), and adopted and emerging local policy documents. It has also taken into account a wide range of area or theme based local studies including the Small Scale Area Extension study and the Swindon Joint Area Transport Assessment.

3.7 The scope of the study included a literature review of relevant policy and guidance as detailed above, an evaluation of current transport trends in Swindon and an assessment of the implications of proposed growth to 2026. Each of the listed documents was taken into account by WSP, and their strategic content has shaped the study.

## **Methodology**

3.8 The review of current transport issues in the Borough identified a number of key themes which would inform the strategy development:

- the railway lines cause major severance, particularly for pedestrians and cyclists;
- the A419 and A420 also act as barriers to pedestrian and cycle movement;
- journey times are more attractive by car thereby discouraging travel by other modes;
- there are problems related to car parking supply and demand; and
- a number of congestion hotspots on the highway network.

3.9 Further, extensive modelling undertaken to assess the impact of growth on the highway network in the longer term showed that the existing problems would only be exacerbated by the proposed growth in the period to 2026.

3.10 Following the contextual review, three key objectives for the Transport Strategy were agreed in consultation with local stakeholders and MATS to:

- Deliver a vibrant local economy: the economic prosperity of the town has been key to attracting employers and therefore employees. It is also important for the existing and future retail opportunities;
- Improve the sense of place: highway dominated environments were identified as a key issue. Improvement to pedestrian and cycle permeability, by reducing the conflict between motorised traffic and other road users will help to redress the balance; and
- Reduce the need to travel: reducing the distances and need to travel provide greater choice while maintaining life chances.

3.11 At this stage a number of principles were also agreed to guide the development of the Transport Strategy:

- Encourage short distance trips by walking or cycling;
- Encourage journeys into the town centre;
- Encourage journeys around but within Swindon; and
- Provide good access to the strategic transport network.

3.12 For each of these objectives and principles a number of goals were identified:

- reduce the need to travel;
- provide a town centre that is attractive and shoppers;
- improve pedestrian and cycle permeability;
- provide flexible transport for all, enabling choice for travel demand;
- improve choice and reduce dependence on the use of the car;
- capture trips that currently 'leak' from the town
- improve connectivity of movements around Swindon, and
- encourage long distance journeys by rail.

3.13 Using the objectives, principles and goals detailed above, three options were developed to inform a draft transport strategy for the Borough:

- "Mobile Swindon" focused on providing unlimited capacity to meet demand for motorised transport;
- "Opportunity Swindon" related to providing maximum potential to use all modes of travel to meet demand; and
- "Low Energy Swindon" focused on providing sustainable alternative means to reducing demand, or the impact of travel on the environment.

3.14 Potential interventions were identified for each option and concept sketches were prepared to illustrate these options and to highlight the choices and initiatives that could be used to meet the previously agreed objectives and principles.

3.15 A qualitative assessment was undertaken to assess the performance of each option and a matrix assessment of the outline strategies was prepared. It was apparent from this assessment that elements of all three options would be required to meet the objectives, principles and goals that had been agreed. Quantative assessment of these options was undertaken to compare different scenarios, two modelling extremes being a 'do nothing scenario' and a 'do something' alternative.

3.16 With a greater understanding of the potential for modal shift, whether by cycling, walking, bus, rail or tram, it was then possible to focus the emerging strategy further.

3.17 The outline strategy options (mobile, opportunity and low energy Swindon) evolved into one approach as a result of the previous stages of the study. Further consultation was undertaken on this one approach and a 'hybrid' final transport strategy was prepared. This strategy was subject to a Strategic Environmental Assessment (SEA) in accordance with the SEA regulations.

## The Final Strategy

3.18 The final Strategy identified an integrated package of transport measures to support the sustainable growth of Swindon, and meet travel demand. The objectives of the Strategy are to deliver a vibrant local economy, improve the sense of place and reduce the need to travel. Ultimately this involves improving Swindon's transport system today, and for the future.

3.19 It is intended that the objectives of the strategy will be achieved by:

- supporting new investment in strategic public transport infrastructure;
- improving accessibility and social inclusion through providing sustainable linked communities, which have a range of services and facilities, and which are well connected to major employment, services and retail destinations with particular focus on Swindon town centre;
- reducing the rate of growth of traffic congestion through promoting modal shift to sustainable transport methods, implementing effective travel choices and ensuring that development takes place in locations which are accessible by a range of transport modes;
- supporting the development of infrastructure for telecommunications and information technology and any other measures that may reduce the need to travel, while taking into account the impact on the environment and public health;
- improving the environment and quality of life through transport infrastructure and applying policies including those related to development densities, to ensure development can address the adverse impacts of traffic, giving priority to walking and cycling and public transport;
- promoting walking and cycling as a major mode of travel in Swindon and in support of community, health and sustainability objectives through improving the environment for pedestrians and cyclists, and providing priority on particular routes; and
- improving road safety, by delivering appropriate infrastructure improvements within new development.

3.20 In summary, the Strategy aims to improve choice and thereby reduce reliance on the private car as a primary means of providing mobility. Public transport, cycling and walking are at the heart of the strategy but the interventions proposed for these modes are strongly supported by the provision of necessary infrastructure that is safe and secure.

3.21 Key elements of the Strategy include:

- Rapid Transit Network;
- Improved bus services and an orbital bus route;
- Improved pedestrian and cycle networks and facilities;
- Parking Interventions;
- Intelligent Transport Systems;

- Smarter Choices and demand management measures; and
- Highway improvements.

### **Rapid Transit Network**

3.22 The core of the proposals is the delivery of a rapid transit network serving the major developments on the urban fringe of Swindon. It is intended that a number of high frequency transit corridors will provide direct access to the town centre and key facilities throughout Swindon.

3.23 The service should be reliable and easily accessible (with minimum walking distances to bus stops for travellers) and careful branding will increase awareness and attractiveness of the service. The Strategy identifies that such a system would benefit from:

- a new crossing of the A419 to provide dedicated access to the Eastern Development Area;
- public transport priority to provide for reliable journey times into the town centre;
- highway capacity enhancements in the north west through the construction of the Purton Road to Great Western Way link; and
- a new link through Redposts Drive to reach the Wichelstowe development .

### **Bus services**

3.24 It is proposed that the Rapid Transit Network will be supported by a new, conventional bus-based orbital route which will cater for demand that does not need to travel through the town centre. This will link the Rapid Transit System with Park and Ride services.

3.25 A new and improved bus station in the form of a Bus Exchange will be delivered at the western end of Fleming Way as identified in the Central Area Action Plan, and improved interchange facilities will enhance access by other sustainable modes including walking, cycling and by rail throughout the Borough.

3.26 Service modifications are likely to be required and consideration will need to be given to the rationalisation of services, fare incentives and bus priority on key corridors in order that a comprehensive and efficient service can be provided.

### **Walking and cycling**

3.27 A continuous and comprehensive network for pedestrians and cyclists is another important element of the Transport Strategy. In addition to improved facilities such as off-road cycle routes, additional and more secure cycle parking, enhanced street lighting and crossing points, it is proposed to facilitate easier walking and cycling around Swindon (especially for access to the town centre) by improving signage and enhancing the urban realm.

3.28 A number of modal specific actions are also included in the Transport Strategy. These include cycle awareness and proficiency training, safer routes to school, completion of missing links in the cycle network, links to out of town leisure destinations and enhanced and expanded Shopmobility.

3.29 The Council will also continue to publicise walking and cycling and support specific campaigns such as Walk to Work Week and Bike Week.

### **Parking interventions**

3.30 The Strategy covers a wide range of parking policy elements designed to work together to balance the various competing demands for parking and road space within Swindon. The elements proposed include:

- a town centre parking strategy that will encourage long-stay retail rather than short-stay or day-long parking;
- flexible parking standards that do not discourage walking, cycling and the use of public transport but which cater for demand at journey origins;
- new park and ride sites of an appropriate scale and at appropriate locations; and
- real-time car park information.

### **Intelligent Transport Systems (ITS)**

3.31 ITS is a fundamental building block for delivering a range of transport interventions. It can provide the Council with a tool to manage the whole of the town's motorised transport system. This could be done in a number of ways, for example by priority improvements for public transport, real time information for passengers and car park users, and environmentally sensitive Urban Traffic Management and Control (UTMC) which can manage traffic flows as well as facilitate the delivery of traffic information.

3.32 The Authority has already begun rolling out elements of the UTMC system through its Intelligent Transport Systems (ITS) strategy funded from the Local Transport Plan.

3.33 A system to provide real time bus passenger information is already in place along with a car park guidance system comprising nine variable message signs on key radial routes to the town centre. The associated "back office" system will form the core of the UTMC system.

3.34 Additional elements such as journey time monitoring, co-ordinated traffic signal control, highway CCTV and pollution monitoring can all be co-ordinated through this system if and when decisions are made to proceed with these projects.

### **Smarter Choices and demand management measures**

3.35 In order to support behavioural change a number of Smarter Choices and demand management measures are recommended in the Strategy, some of which the Council already undertake. For example, Swindon already has a car share scheme and the Travel Awareness Officer is heavily involved in workplace travel planning initiatives (SWIFT) and the promotion of specific campaigns such as Liftshare and Bike Week.

3.36 Smarter Choices is about positively encouraging travellers or organisations to change travel behaviour for the benefit of themselves and for Swindon in the longer term. The Strategy proposes 'Smarter Choices' elements that are considered to have a key role in positively supporting other investment in physical infrastructure or services. These include:

- Travel plans for all new developments;
- School travel plans and travel awareness campaigns; and
- a personalised travel planning pilot as part of a new development.

3.37 It is also intended to further integrate taxis into the public transport system and provide greater incentives to encourage local living and working.

## **Rail**

3.38 By design the railway in Swindon tends to cater for long distance journeys. The Strategy recognises that there is limited opportunity to directly affect the wider investment strategy for rail provision across the region but there are opportunities for the Council to influence certain issues that effect rail patronage such as car parking capacity and charges, and passenger fares.

3.39 However, it is considered most appropriate for the Transport Strategy to focus on improving access to rail services, enhancing the rail traveller's ability to choose how to get to and from the station, and to integrate the rail station with the town centre more effectively.

3.40 The Strategy proposes:

- a travel plan for all users of the station;
- improved cycle parking and storage;
- improved signage for walkers and cyclists;
- improved interchange between transport modes, and
- relocation of car parking to the north of the station.

## **Highway improvements**

3.41 Timely investment in highway infrastructure will be critical if Swindon is to accommodate sustainable growth over the next 20 years.

3.42 The Strategy identifies that investment will need to be targeted at providing the necessary access to new development, delivering reliable public transport journey times and minimizing environmental impact.

3.43 Key components of the Strategy in this respect are:

- increased capacity at pinch points on the network;
- reduction of vehicles in the town centre;
- improved road safety;
- rapid transit/bus priority and high occupancy vehicle lanes on key corridors;
- enhanced urban realm and a low speed town centre environment;
- residential 20mph speed limits; and
- the delivery of a number of highway schemes.

The major highway improvement schemes that are identified for delivery in the Transport Strategy are:

- Purton Road to Great Western Way link;
- M4 junctions 15 and 16; and
- Whitehart junction/ a 'Green Bridge' over the A419/Dorcan Link/Commonhead (providing access to the Eastern Development Area)

3.44 Whilst many of the proposed interventions outlined above relate to the urban core of Swindon, it is equally important to ensure that transport demands are catered for in the rural areas that surround Swindon.

3.45 Proposals for a new bus exchange and improved interchange within the town centre will specifically support rural bus services. The Borough Council is also working to enhance successful community transport services. Other interventions that will also help improve the level of accessibility for people living and working in rural areas include the improvement of cycle and pedestrian networks, and travel planning both for major employers and at a personal level.

3.46 The integrated approach set out by the Transport Strategy is intended provide ease of movement to, within and around Swindon by:

- Reducing congestion;
- Helping to improve mode shift; and
- Improving access to the town centre.

3.47 A ranking exercise has been undertaken to review the full range of individual interventions proposed. Through this process it has been identified that a number of fundamental 'building blocks' will be required without which the Transport Strategy cannot be delivered. These 'essential elements' are set out in Table 3.1.

Table 3.1: Swindon Transport Strategy Essential Elements

<b>Transport Element</b>	<b>Essential Need</b>
Rapid transit system	Supports sustainable transport choice in the largest developments in Swindon as well as the regeneration of the town centre
UTMC	Provides the basic building blocks for real time passenger information, bus priority, car parking management systems and highway network organisation
Town centre speed management and urban realm improvements	Delivers a pedestrian and cycle friendly environment, supports the town centre regeneration and assists in linking the town centre with the railway station and North Star development area
Strategic cycle network completed	Provides safe and secure routes for cyclists to support all other cycle measures
Improved bus station	Essential to deliver the quality of service necessary to attract people to use public transport
Workplace travel planning	Workplace travel planning has the ability to effect the largest single journey purpose in busy peak periods. Comprehensive roll out through Transport Management Associations or other deliver vehicles will reduce overall traffic movements effectively and support public transport and cycle investment.

3.48 All of the proposed interventions are split into short-term (2008-2015), medium-term (2016-2022) and long term (2023-2026) time horizons and a proposed delivery programme.

### **Funding**

3.49 The total expenditure for the proposed interventions is estimated to be in the region of £370 million. This is based on conservative estimates and an indicative shortfall of £20 million pounds has been identified.

3.50 The Transport Strategy identifies a range of potential funding sources that can be utilised to deliver the proposed interventions over the next 20 years and fill this gap. However, the Strategy was completed before the recent economic down turn. As well as significantly altering projected levels of economic and housing growth it has also resulted in significant restrictions on all possible funding sources. Following the General Election in spring 2010 the new government has abandoned the regional planning framework and the associated system of Regional Funding Allocation. It has also announced a review of the system for funding major transport schemes

3.51 It has become increasingly difficult to see how the levels of investment in transport infrastructure required to support the original projections for growth outlined in the draft Regional Spatial Strategy can be secured.

3.52 The subsequent Swindon DaSTS study took the Swindon Transport Strategy work into the new era of significantly reduced levels of funding for infrastructure and a new approach to setting local targets for employment and housing growth.

## 4 Challenges and issues

*This chapter sets out the current social, economic, environmental, land use and transport situation in Swindon and describes the main transport related challenges and issues. It goes on to set out some of the future developments proposed for Swindon, and describes their likely transport implications, particularly where they could lead to future problems.*

### Existing Situation

#### Social and Demographic

##### Population and deprivation

4.1 The population of Swindon Borough in the 2001 Census was just over 180,000 people living in some 75,200 households. Estimates of the change in the intervening period to the present day suggest that the population living in Swindon in 2009 could already be around 200,000 and is forecast to rise further, with forecasts of over 220,000 in the future, though forecasts of future population vary, from 220,000 in 2016<sup>2</sup> to 221,000 in 2026<sup>3</sup>.

4.2 Swindon has a broadly comparable age profile to other places in the South West (2001 Census). Some 65% of Swindon's residents are aged 16-64, compared to (for example) 66% in both Bristol and Bath. Around 31% are aged 24 and under (compared to Bath with 32% and Bristol 34%). There are though higher proportions of younger people in some parts of the town as a result of these areas' growth tending to attract younger residents. For instance, in areas of West Swindon, the proportion is nearer 37%. The proportion of older people is broadly comparable to, but slightly lower than, other places in the South West. Overall, around 14% of Swindon's residents are 65 and over, compared to 15% in Bristol and over 17% in Bath. Again, areas within Swindon vary, ranging from around 6% in West Swindon to over 20% in Old Town and Lawn.

4.3 Car ownership in Swindon (in the 2001 Census) was 1.5 cars per household (close to but slightly below the national average), with around 32% of households having two or more cars. Some 22% of households did not have access to a car (below the national average of 27% but similar to the average for the South West).

4.4 There was some variation in car ownership, with higher proportions of households with no cars in some areas (in particular Parks, Penhill, Gorse Hill and Pinehurst, and Walcot, all with over 35% of households with no car). Conversely, many areas were significantly below the average (notably Abbey Meads, Grange Park, Haydon Wick, Shaw and Nine Elms) which all had around 10% or fewer households with no car; rural areas of Swindon Borough have even lower proportions. Areas with the lowest proportion of households with no car were the same areas that tended to have the most households with multiple cars.

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<sup>2</sup> Swindon Primary Care Trust (PCT) forecasts

<sup>3</sup> 'The Draft Regional Spatial Strategy for the South West 2006-2026, Strategic Sustainability Assessment', Main Report, March 2006

4.5 The 2007 Index of Multiple Deprivation (IMD) uses a number of 'domains' to build-up a picture of local areas, related to economic, social, environmental, etc, features, the lack of which indicate some level of 'deprivation'; domains include income, education, employment, health and disability, housing, living environment and crime. Scores are produced for each domain, and a weighted aggregate gives an overall index of 'multiple' deprivation.<sup>4</sup>

4.6 Swindon has a reasonably low IMD score of 16.94 and a rank in the Districts of England of 182.<sup>5</sup> This compares well with other urban areas in the South West; Bristol and Gloucester have more deprivation than Swindon and are ranked at 64 (score 27.76) and 118 (score 21.64) respectively, whereas Bath is ranked 272 (score 11.47) and Cheltenham at 202 (score 15.92).

4.7 The South West Observatory 'State of the West: 2008' report notes that 113 of the 3,226 Super Output Areas (SOAs) in the South West of England are in the most deprived 10% SOAs in England. More than half of these are in Bristol (39) and Plymouth (16), whereas Swindon has eight; Parks and Moredon are the main areas that contain the SOAs with the highest IMD scores.

## Skills

4.8 National Indicator 164 is part of the economic development and enterprise block of Swindon's Local Area Agreement (LAA), one of the 30 indicators (out of a total of 198), selected in Swindon's LAA to monitor performance. The indicators form the basis of the Performance Framework for Local Government associated with 'Strong and Prosperous Communities'<sup>6</sup>.

4.9 Indicator 164 monitors the role that skills and qualifications play in supporting economic development. It is measured by the proportion of the working age population (males 19-64 and females 19-59) qualified to at least level 3 or higher (further education, 'A' or 'A/S' level). While Indicator 164 is focused on education, skills and qualifications also form an integral part of economic development and competitiveness, and a key partner in delivering the indicator is the Swindon Strategic Economic Partnership Employment and Skills Board.

4.10 Swindon is one of 42 local authorities in England targeting this indicator. The 2008 baseline defined for the Indicator in Swindon was 43.8% and has remained broadly static over recent years (for instance, 43.2% in 2003). The current Swindon value is somewhat lower than both the South West average (51.7%) and the overall England value (49.5%).<sup>7</sup> Swindon's target is an increase of 4% by 2010/11.

4.11 Other areas in the South West targeting this Indicator include Plymouth and Torbay, both of which also have current values below the South West average (48.1%

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<sup>4</sup> 2007 Index of Multiple Deprivation, Department for Communities and Local Government

<sup>5</sup> IMD ranks 'deprivation', so the higher the rank, the less deprived an area is. The lowest ranking district in England (i.e. the most 'deprived') is Liverpool, and the highest rank (and hence considered the least deprived) at 354 is Hart in Hampshire.

<sup>6</sup> Swindon's Second Local Area Agreement, Swindon Strategic Partnership, Jun'08-Apr'11

<sup>7</sup> 'Research and Statistics Gateway – DIUS: Qualifications at a local level for adults': Department for Children, Schools & Families and Department for Business, Innovation & Skills ([www.dcsf.gov.uk/rsgateway/DB/STA/t000809/index.shtml](http://www.dcsf.gov.uk/rsgateway/DB/STA/t000809/index.shtml)) and 'The Data Service' ([www.thedataservice.org.uk/statistics/sfrjun09](http://www.thedataservice.org.uk/statistics/sfrjun09))

and 47.4% respectively), and Devon (where the current value is 53.2%, though this is a marked increase from previous years when the value was around 50%).<sup>8</sup>

## Safety

4.12 The Wiltshire & Swindon Road Safety Partnership<sup>9</sup> report progress towards the 2010 Government road traffic casualty reduction targets ('Tomorrow's Roads – Safer for Everyone'). This indicates that progress towards the national targets in Swindon Borough is mixed, with targets being exceeded for reductions in the number of children killed or seriously injured (KSI) and people slightly injured, whereas targets are not being met in reducing the overall number of KSIs. Progress against targets is shown in Table 4.1.

Table 4.1: Swindon road safety targets

Target*	Swindon progress (2007)
40% reduction in the number of people killed or seriously injured in road collisions	20% reduction (24% for SW region) (36% for GB)
50% reduction in the number of children killed or seriously injured	63% reduction (55% for GB)
10% reduction in the slight casualty rate, expressed as the number of people slightly injured per 100 million vehicle kilometres	12% (7% for SW region) (20% for GB)

Note: \* Target is based on comparison with the average for 1994-98.

4.13 Another element of safety is personal security, which in the transport context generally relates to personal security on or around public transport. In this regard, the Swindon Transport Strategy identified through its consultation processes that there are some concerns about personal security at the bus station, citing poor facilities at the bus station in Swindon and its generally 'poor environment'.

4.14 Security also relates to cycle parking. The Swindon Transport Strategy identified a lack of secure cycle parking in Swindon.

## Quality of Life

4.15 Transport affects a number of issues which contribute to the overall quality of life. Guidance from the DfT suggests these include accessibility to green spaces and leisure facilities, noise levels, impact on landscape and heritage, impact on biodiversity, the end-to-end journey experience, and the way in which transport integrates into local streetscapes.

4.16 The DaSTS Main Report discusses the goals for transport. In doing so, it sets out how transport can affect quality of life; "Transport can make a strong contribution to the quality of people's lives. It brings great benefits to us all by making it possible to see the world, buy a huge range of goods and services, enjoy leisure activities, spend time

<sup>8</sup> 'Local Priorities Website' from the Department for Communities and Local Government ([www.localpriorities.communities.gov.uk](http://www.localpriorities.communities.gov.uk))

<sup>9</sup> Road Casualties in Wiltshire and Swindon – 10<sup>th</sup> Joint Report, January 2009 (2007 data)

with friends and relatives and have access to the natural environment. However, there is sometimes a tension between the benefits that transport users enjoy and the costs that transport can impose – for example on people who live near roads and railways, ports and airports, and on the natural environment, including biodiversity and landscape.”

4.17 It goes on to note: “It is clear that a transport strategy that was predicated on a net adverse impact on the natural environment would be as unsustainable as one that failed to deliver greenhouse gas reductions. Fortunately, in the light of Eddington’s conclusion that the connectivity of our network is basically sound, with a few exceptions where capacity is already constrained, in the future we would expect to identify a reduced need for major new transport infrastructure. This offers a real opportunity to develop packages of transport measures that actively enhance our environment and improve our quality of life. Where new infrastructure is required, we will seek solutions that mitigate unavoidable adverse impacts such as land-take and noise.”

4.18 Measuring quality of life can therefore take into account many facets. In simplistic terms, a measure of quality of life could arguably be defined as the inverse of the index of multiple deprivation. Swindon’s Community Strategy makes the best attempt to promote quality of life including all its elements. Some of the key elements of quality of life are encapsulated in broader economic and environmental issues, for instance the availability of work that provides adequate remuneration for basic lifestyle needs and un-polluted local environs, and as such are discussed further below.

## **Economy**

### **Swindon Context**

4.19 The Swindon Economic Assessment<sup>10</sup> indicates that Swindon’s economy has a solid foundation and is a consistent performer. Along with this, the Swindon Economic Profile 2009<sup>11</sup> provides some key statistics. Swindon is ranked in the top 20% of districts nationally, based on the assessment of a number of economic indicators, including productivity (in which Swindon is some 40% above the national average) and Gross Value Added (GVA) per head. However, the assessment identifies that development in the town centre as an employment location has lagged behind growth in more peripheral areas, with the consequent effect of increasing transport demands in suburban areas (mostly through increasing car traffic).

4.20 The three biggest industry groupings in Swindon account for 82% of GVA and 65% of the workforce. These include business services, banking and finance (with approx 35% of GVA and 25% of workers), manufacturing (25% of GVA and 14% of the workforce) and distribution, transport and communications (23% of GVA and 26% of jobs). Within manufacturing, major companies operate in advanced engineering (including automotive), pharmaceuticals, information technology and electronics, and environmental technology. Research and development is also strong in the Swindon economy, related both to the high-tech manufacturing sector and the location of headquarters’ functions of the UK’s Research Councils.

4.21 Average earnings in Swindon were very similar to Great Britain averages in 2009 (approximately 1% higher). However, gross disposable household income has

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<sup>10</sup> ‘Swindon Economic Assessment 2009’, Swindon Strategic Economic Partnership, June 2009

<sup>11</sup> ‘Swindon Economic Profile 2009’, Swindon Strategic Economic Partnership, 2009

grown more slowly in Swindon since 2000 than the wider South West or the UK as a whole. Average earnings have also grown more slowly than Swindon earnings have historically done. These figures do not take fully into account the recent economic slowdown and recession, which are likely to have had a negative effect on earnings, though whether Swindon will have altered relative to the rest of the UK is less likely.

4.22 Swindon's economy has suffered in recent times, along with the rest of the UK, as a result of the global recession caused by crises in the banking system. In particular, exposure to some major industries has resulted in temporary and permanent lay-offs, many of which have been in the manufacturing and financial sectors. Overall, unemployment in Swindon rose from 2.2% in August 2008 to 5.2% at the same time in 2009 (as measured by the increase in Job Seekers Allowance claimants), going from well below the UK average to well above. This is against a general increase across the region and the UK.

### **Economic Strategy**

4.23 The 'Regional Economic Strategy for South West England 2006-2015' (RES) has a "shared vision for the development of the region's economy" within the wider context of sustainable development and complementing the Regional Spatial Strategy. There is a strong compatibility between the RES and DaSTS study objectives for Swindon, focusing in particular on the sustainable and inclusive connectivity of people, places and business. It cites the key potential for Swindon to play a far more significant economic role in the region.

4.24 The economic development model of the South West is expected to have to restructure against a background of low economic growth potential, from public sector, business and financial services towards new technologies in manufacturing, construction and business services, favouring a shift towards a lower carbon future.<sup>12</sup> This fits in well with Swindon's Community Strategy and other economic frameworks and strategies.

4.25 Swindon's 'Economic Vision and Framework' (2007) provides an overarching vision and structure for the economic development of Swindon up to 2026. It identifies four key themes which are then developed into a future 'smart' growth strategy, which in turn informs an economic development framework. It is currently unclear how much that delivery of the Vision may be affected by economic conditions, but it remains the main basis for the economic development strategy for the town.

4.26 The 'smart' growth strategy consists of education and entrepreneurship, regenerating the town centre, seeking solutions to climate change and creating sustainable environments for communities and businesses. The proposed economic development has four elements: business creation and growth, regenerating and creating place, image and culture, and skills and labour market. Future growth sectors for the town are suggested as science and technology (in particular environmental technology), people care and cultural industries.

4.27 Sustainable transport is seen as a key part of the Vision, including strong linkages between key points in the town. The Vision includes aspirations for specific schemes, such as a 'fully integrated transport system' and guided buses from park and

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<sup>12</sup> South West Observatory's Business Economy Module Review Issue 18 (Fourth Quarter 2009)

ride sites to the town centre. Keeping traffic flowing on core routes in and around the town (including the M4) is also seen as critical.

4.28 LAA Indicator 153, part of the economic development and enterprise block of Swindon's Local Area Agreement, is geared towards reducing 'worklessness', based on the proportion of working-age people claiming benefits in the worst performing neighbourhoods. This indicator supports the strategy for regeneration and renewal, and aims to unlock potential in the most deprived communities. There is a direct focus on the 'worst areas' and the link between accessibility and transport connectivity to employment opportunities. The 2008/09 baseline for the Indicator is 28.1%, with a 2010/11 target of 27.4%.

4.29 The Borough Council is currently working with a range of partners to develop a 'Single Plan' for Swindon. The process by which this is being undertaken is known as 'Destination Swindon', which is aiming to translate Swindon's 2030 Vision (from Swindon's Community Strategy) into a focus for delivery by the Borough Council and its partners over the next four years. It has six themes, with one being directly related to the economy – "More Swindon residents are benefiting from and contributing to Swindon's dynamic economy". Part of this is linked into raising the skills and attainment of Swindon's workforce, but part is related to transport. The current work indicates that Swindon's past success has been due in large part to its good transport and communications links but that further investment is needed if this competitive edge is to be maintained.

## **Regeneration**

4.30 Swindon's town centre has effectively failed to keep up with development of its suburbs and urban expansions. As such, the town centre arguably has somewhat limited retail options for a town of almost 200,000 inhabitants, and is therefore not considered the 'destination of choice' for Swindon residents or the wider immediate hinterland.

4.31 Anecdotally, Swindon residents are known to regularly travel to Bristol (both the city centre and Cribbs Causeway Mall), Bath, Cardiff, Cheltenham and Reading for shopping. As in other places in the UK, the comparative decline of the town/city centre has been exacerbated by the development of large supermarkets in suburban areas and 'out-of-town' retail parks, which between them have substantially removed grocery, furniture and electrical retailing from centres.

4.32 In the context of Swindon, while key elements of the urban extensions they are part of, two 'district centres' have also developed; at the West Swindon Centre and the Orbital Shopping Park (Northern Development Area). These are both significant shopping centres, which, although they do not provide the full range of retail opportunities, offer more than just day-to-day grocery, and furthermore also include community facilities such as libraries and, at West Swindon, the Link leisure centre. While a major attraction in its own right, the Great Western Outlet Mall, sited in part of the former railway works some 1km west of the town centre, is also significant competition for trade, especially in clothing.

4.33 Regeneration of Swindon's town centre is a key aim of the economic strategies of the town, and the New Swindon Company has been constituted to specifically drive this forward. A series of ambitious regeneration schemes are being

planned for Swindon town centre. Two major agreements were signed in 2008, for a total of almost £600 million, including:

- Union Square – a £350m mixed use development, involving an element of funding from the Housing and Communities Agency, comprising retail, office, leisure and residential uses; and
- Regent Place – a £215m mixed development including retail, residential and leisure facilities along with car parking.

4.34 However, re-development proposals in the town centre are currently uncertain. As a result of financial difficulties at developer Modus, primarily caused by the recession and financial crisis, the Regent Place proposals have been terminated, and will no longer be completed in their initially envisaged form.

### **Local Investment Plan**

4.35 The Local Investment Plan sets out Swindon's long-term investment needs to support its plans for growth, development and regeneration as set out in the LDF Core Strategy. Its aim is to bridge any funding shortfalls that are identified. It will be updated on a regular basis in light of changing circumstances and is developed with partner organisations and with community participation.

### **Environment**

#### **One Planet Living**

4.36 The Borough Council is striving, through its 'Shared Vision for Swindon' to become one of the most sustainable communities in the UK by 2030. To help realise this goal, the Council has adopted 'One Planet Living' as the framework by which it will improve its social, economic and environmental performance. It has decided that its initial efforts should be concentrated on:

- sustainable transport
- sustainable energy (zero carbon)
- local and sustainable food
- sustainable waste

4.37 The aim of the Sustainable Transport principle within One Planet Living is to provide transport systems and infrastructure that reduce dependence on fossil fuel use, and encourage people to choose sustainable transport options. This could translate into reducing time in traffic jams, reducing emissions from cars, as well as increasing physical exercise and improving road safety.

4.38 The Sustainable Transport element of One Planet Living within Swindon is still under development but the initial work has established a clear link between the drivers, the current strategies and current projects. Drivers are seen as:

- Matching the transport system to expected growth demands;
- Congestion and lowering greenhouse gas emissions;
- Access to services and facilities;
- Reducing car dependence;
- Increasing health and happiness;

- Place shaping;
- Attractive to business; and
- Accident reduction.

4.39 Sustainable Transport is seen as having links to the other One Planet Living principles of zero carbon, health and happiness, and local and sustainable food. It also links to National Indicators 175 (Access to services and facilities by public transport, walking and cycling) and 186 (CO<sub>2</sub> emissions in local authority area).

#### National Indicator 186

4.40 Indicator 186 is part of the environmental sustainability block of Swindon's Local Area Agreement, and measures per capita CO<sub>2</sub> emissions. The Indicator uses centrally produced statistics to measure end user CO<sub>2</sub> emissions in local areas from business and the public sector, domestic housing and road transport. This indicator is particularly useful in understanding the baseline situation, such as the contribution of transport to overall CO<sub>2</sub> emissions in Swindon, and how the town compares to the wider South West region and the UK as a whole. Table 4.2 illustrates:

Table 4.2: CO<sub>2</sub> emissions per capita (kt) – from Indicator 186

	Total (kt)			Road Transport					
	2005	2006	2007	2005		2006		2007	
Swindon	8.7	8.7	8.4	1.8	20%	1.7	20%	1.7	20%
South West	7.2	7.1	6.9	1.9	26%	1.8	26%	1.8	26%
United Kingdom	7.3	7.2	7.0	1.8	24%	1.7	24%	1.7	25%

Source: calculated from data provided by Department of Energy and Climate Change (DECC)

4.41 Consistent information is only available for the period as recently as 2007 (released in November 2009). This suggests that Swindon's CO<sub>2</sub> emissions per capita are relatively high compared to the South West and the UK, though this is likely to be caused by a higher than average industrial usage. On the other hand, road transport emissions are similar to national figures, and lower than the South West as a whole. It is responsible for a relatively low 20% of Swindon's total emissions (again as a result of industrial emissions being prevalent in Swindon).

4.42 It is worth noting that CO<sub>2</sub> emissions per capita from road transport reduced in Swindon, the South West region and the UK between 2005 and 2007. This is in line with a reducing trend for total CO<sub>2</sub> emissions at all levels.

#### Baseline Environmental Characteristics

4.43 The Swindon Transport Strategy included a Strategic Environmental Assessment (SEA) of its strategy. As part of this, environmental baseline was assessed. Key issues were identified under each of the topics included. The following shows the SEA topics and (where specified) the problems outlined<sup>13</sup>:

- **Biodiversity** – The planned growth of Swindon puts pressure on the urban fringe where there are both threats, such as continued urban growth and intensive

<sup>13</sup> Swindon Transport Strategy – Strategic Environmental Assessment – Environmental Assessment Report, December 2008

agriculture, and opportunities for Swindon's wildlife. Climate change also poses a threat but the effect that this may have and the species at risk is not yet clear;

- Water – With increases in the built-up area in Swindon, there is the possibility of increases in hard surfacing increasing water run-off. This may result in problems of localised flooding and polluted surface water containing contaminants such as oil, fuel or salt entering river systems;
- Landscape – The existing townscape, particularly within the centre of Swindon, has been identified as an area for improvement;
- Soils;
- Material assets – (land) Swindon's comparatively recent growth is the major factor behind a general deficit of large brownfield and urban redevelopment opportunities in the town;
- Population – significant recent and future growth;
- Cultural heritage – Swindon Borough has a broad variety of man-made historic features;
- Air quality – air quality in the Borough of Swindon is generally good with no Air Quality Management Areas (AQMA) required, though there are individual concerns in certain areas;
- Climatic factors; and
- Human health – the death rate in the Borough for all diseases is similar to that nationally, but the deprived wards have a higher rate. Teenage conception rates remain higher than the national average. Concerns about crime, anti social behaviour and drug misuse are widespread.

## Land Use

4.44 Swindon has grown substantially over the last 60 years, and has expanded in all directions from the original core areas focused around the Great Western Railway works and Old Town. In the last 30 years, significant urban extensions to the north and west have catered for most of this growth, the most recent major developments being the northern expansion, which has grown from Abbey Meads and Haydon Wick over the last 10 years. Growth is set to continue, in the first instance with the Southern Development Area, marketed as Wichelstowe. This has commenced construction, though has made limited recent progress as a result of recessionary pressures.

4.45 Historically, transport-related accessibility has been a key element of attracting business to Swindon. Indeed, it was the choice of Swindon for Great Western Railway's major engineering works that led to Swindon's growth from a small pre-industrial market town. Although some companies have been attracted by the rail access provided by Swindon station, roads-based access has been far more important in recent years, particularly access to the M4 and A417/A419. The relatively close proximity of Heathrow and Bristol airports has also been used to attract businesses to the area. While transport remains an important consideration in business location, the availability of other key elements such as land, potential workforce, suppliers, and other incentives have increased in importance.

4.46 There is little substantial evidence of companies being persuaded to leave Swindon due to traffic-related conditions. Whilst parking provision remains an important issue for many companies, the levels of current congestion within the town centre do not appear significant enough to affect locational choice or expansion decisions within the town. Most of the significant congestion occurs on the edges of the town close to the strategic highway network.

## Key Current Transport Challenges

4.47 The Swindon Transport Strategy analysed available transport and demographic data, as well as undertaking a comprehensive programme of stakeholder consultation, in order to identify the key current transport issues and challenges affecting Swindon. The Final Report identifies particular challenges for transport in the town:

- Journey times are more attractive by car within the urban area than by public transport;
- The railway line causes major severance for access into the town centre by all modes, but especially for pedestrians and cyclists;
- Car parking issues; including pricing and locations of car parks attracting journeys into the town centre by car and underutilised Park and Ride not supported by the dispersed nature of employment opportunities around the town;<sup>14</sup>
- A419 and A420 acting as barriers to pedestrian and cycle movement east-west and north-south, particularly for the proposed Eastern Development Area (EDA); and
- Modelling has shown that there will be significant congestion on the highway network with vehicles on a high number of links exceeding capacity, in addition to significant junction delays in the town centre and on the eastern and southern edges of Swindon.

4.48 It is important to note that these key challenges are focused directly on transport issues. This underlines that the Swindon Transport Strategy was less concerned with the wider DaSTS agenda, especially economic growth and climate change. In addition, the Swindon Transport Strategy was primarily focused on the Swindon urban area, and as such did not specifically identify many issues related to the wider national and regional road and rail networks.

4.49 Within these headline challenges, the Swindon Transport Strategy Final and Issues Reports go on to set out specific issues which affect, or are affected by, elements of the transport system, that have essentially led to the main challenges being identified. These are outlined below.

## Public Transport

### Bus Services

4.50 Public transport in Swindon is primarily provided by the bus network. Bus services in the town are mostly run by two operators, Thamesdown Transport (one of the few remaining municipally-owned bus companies in the UK) and Stagecoach in Swindon (subsidiary of the Stagecoach Group). A number of smaller operators also provide specific services, mainly under contract to the Borough Council. Long-distance

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<sup>14</sup> Since the Swindon Transport Strategy report was finalised in May 2009, the dedicated Park & Ride bus service linking the Copse and Wroughton Park & Ride sites has been suspended and the Copse site closed. The Wroughton site is still operational, though is now served by a non-dedicated town bus service linking the developing East Wichel (in the Southern Development Area) and Haydon Wick, via Old Town and the town centre (service 11).

scheduled coach services are also available, through National Express and Stagecoach's Megabus.

4.51 The town network predominantly operates commercially during the day, but (in common with many other places) evening and Sunday services are primarily subsidised, and there is a marked drop-off in service availability at these times. In many areas the Sunday service is infrequent and sparse; some weekday routes are amalgamated and frequencies are typically no better than hourly, leading to limited usage.

4.52 Bus services in the expansion areas are yet to reach the intensity of those in more mature areas of the town, in particular in the Northern Development Area where some weekday services are still supported by developers' contributions and the Borough Council. A single bus service penetrates the Southern Development Area at East Wichel.

4.53 There are complaints from some businesses about the way in which bus services are almost exclusively focused on the town centre. In addition, consultation for the Swindon Transport Strategy noted that bus services in many parts of Swindon are considered tortuous and slow, as they seek to serve all areas (especially expansion areas).

4.54 The main issues identified in the Swindon Transport Strategy when considering public transport in Swindon were:

- Many parts of the existing bus network provide relatively indirect connections to the town centre. As a result, journey times are not as attractive as they could be, particularly in comparison with the private car;
- The current presentation of the bus network is potentially confusing to new bus users; with a large number of routes which overlap and a lack of emphasis on key high frequency corridors. This could be a barrier to future bus use in Swindon;
- There is no suburban rail or rapid transit provision within Swindon, despite the presence of three major railway lines. This means that Swindon suffers from the severance caused by these railway lines, without reaping the benefits that a rail system could bring;
- The urban form of Swindon is sometimes impenetrable for bus services, leading to longer journey times and less attractive services. Opportunities may exist to provide targeted infrastructure interventions to address some of these shortcomings;
- Bus fares are perceived to be high;
- Current high levels of access to bus services needs to be maintained; and
- Despite some of these constraints, public transport usage and patronage are high and are successes to be built upon.

4.55 In addition, consultation for the Swindon Transport Strategy specifically noted that there is a poor perception of bus services in Swindon and that they are seen as unreliable and hindered by traffic congestion on many routes. The quality of vehicles, as well as cleanliness, was also questioned, as well as poor facilities at the bus station, which was also considered to be not particularly well-connected to the railway station. Infrequent evening and weekend services were also cited, as well as the unattractive journey times to many locations and the lack of cross-town journey opportunities without

interchanging in the centre. The 'exact-fare' only system operated by Thamesdown Transport was thought to be inflexible and integrated ticketing was seen as limited.

4.56 Perceptions of the bus service are much better amongst bus users than in the population generally. The Bus Passenger Survey carried out by Passenger Focus in late 2009 and published in July 2010 found overall satisfaction levels by bus users in Swindon to be very high, and much higher than in many other towns.

## **Rail Network**

4.57 As noted earlier, the presence of the railway in Swindon was a key reason behind the initial development of the town. As such it has played an important part in transport to/from Swindon, albeit with less paramount importance in the present day than in the past.

4.58 Passenger services at Swindon are operated as part of the Great Western franchise, operated by First Great Western. On weekdays, two services per hour operate between London Paddington and both South Wales and Bristol, and one train per hour (most hours) between London and Cheltenham, all bar a select few stopping at Swindon. Less frequent services also operate between Swindon and Westbury. In 2007/08, 2.6 million rail trips were made to/from Swindon station, of these 1 million were between Swindon and London Paddington. There is also currently a high level of demand between Swindon and Bristol Temple Meads in the AM peak (Great Western RUS<sup>15</sup>).

4.59 Swindon currently has freight terminals for metals and cars, with another terminal catering for aggregates nearby at Wootton Bassett. Notable movements include car exports from the Honda factory to the continent via the Channel Tunnel, and steel for the car industry from the Hawksworth terminal (including BMW Mini panels). Swindon Borough Council worked very closely with BMW to develop the steel pressing unit in Swindon, which has resulted in steel now coming in by train and Mini parts going out by train. This has helped to safeguard production in the town as well as transfer freight successfully from road to rail. In comparison, the rail freight depot at Stratton, which is well-located for the A419, has been relatively unsuccessful, due in part to the plot size being unattractive for business operation at the terminal.

4.60 Swindon has good rail links via the Great Western main line. Some rail issues are however noted in the Great Western RUS and Swindon Transport Strategy:

- Constraints exist on the rail network on all approaches to Swindon:
- Two-track sections between Swindon and Wootton Bassett junction, to the west, and between Swindon and Didcot to the east, limit day-to-day capacity for service expansion, and requires lengthy diversions or rail replacement bus services for maintenance; and
- The single-track section between Swindon and Kemble, along with long signalling blocks between Kemble and Standish junction, limits capacity between Swindon and Gloucester;
- Despite the presence of three railway lines converging at the town's main station, there are no other stations and no use is made of rail for intra-urban journeys.

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<sup>15</sup> 'Great Western Route Utilisation Strategy (RUS) Draft for Consultation', Network Rail, Aug'09

Swindon effectively has the severance caused by railway lines without making full use of them; and

- Rail fares to/from Swindon can be very high, particularly for peak-time journeys to/from places east of Swindon.

4.61 Consultation for the Swindon Transport Strategy also specifically noted that access to the railway station is poor, and that the station itself is also not well-regarded, with a lack of north-south linkages across the station also cited. Parking at the station is considered an inhibitor to increasing rail use.

4.62 A recent study of car park use at railway stations by the Association of Train Operating Companies (ATOC) included a case study of Swindon station<sup>16</sup>. This showed that there is likely to be a considerable latent demand for parking at Swindon. Surveys showed the car park is full by 9am on weekdays and the cost is comparatively high (which mounts-up for regular users). In local terms, this has resulted in use of other car parks and more bus and cycle use than might otherwise have been seen (at least partly out of an actual or perceived necessity rather than through choice).

4.63 In comparison with other stations, Swindon is a main destination in rail terms, but is still a net exporter of trips. Comparing station usage with available car parking, the average station usage ratio of 7.3 station 'entries' per parking space is significantly higher than Bristol Parkway (2.7) and Didcot Parkway (3.3), by virtue of them having similar passenger numbers but much bigger car parks, and Chippenham (3.5) which has a similar car park but station entries are lower. Alternatively, Exeter St.Davids (7.5) and Plymouth (9.3) are similar in terms of station entries, but have much smaller car parks, and are arguably more prominent rail 'destinations'.<sup>17</sup>

4.64 In essence, Swindon station has a demand profile that is akin to a 'railhead' as much as it is a 'destination', but has a car park that is closer to that of a destination, and thus smaller than its railhead demand requires.

## **Travel Patterns and Accessibility**

### **Census workplace data**

4.65 Although the Census was last carried out in 2001, the residence and workplace information it includes still provides one of the most comprehensive assessments of where people live and work, which by inference leads to a significant amount of (particularly peak time) travelling.

4.66 Less than 60% of all work journeys are regularly made by car. For people who live in Swindon and work outside the Swindon area, the proportion of trips made by car rises to over 80%. Public Transport accounts for 9% of all work trips, which is split between 1% train and 8% bus. The majority of train journeys are to Reading and central

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<sup>16</sup> Study of Rail Station Car Parking, Association of Train Operating Companies (ATOC), 2009

<sup>17</sup> Note that 'station entries per parking space' is not a measure of how well-used the parking spaces themselves are, but relates the station's overall footfall to the size of the car park. Swindon's ratio of 7.3 is derived from 4,405 average daily station entries and the 607 space car park. 'Station entries' includes both passengers arriving to depart from Swindon (who may want to park a car) and leaving Swindon to return to another station (who are unlikely to have a car in the car park). In general, stations in larger centres that attract a significant number of trips have the highest usage to parking ratios – these stations may also have a comparatively small car park (for instance, Bristol Temple Meads has a ratio of 27.1 – from daily entries of 11,352 and a car park with 419 spaces).

London, while the vast majority (93%) of bus trips are within Swindon. A number of journeys to work are made by foot (10%) or bicycle (5%). Table 4.3 shows a summary of mode shares.

4.67 Swindon had around 94,000 working residents. Of these, 79,000 also work within the SBC area, a residents' workplace containment of 85%. Of the 15% of Swindon residents (14,500 people) who work outside the Borough, Wiltshire workplaces accounts for over 4,000 of these (nearly 30% of out-commuters, and 4% of all Swindon residents), with over half of these in North Wiltshire. A further 18% work in Oxfordshire (almost 2,700), with almost half of these in the Vale of White Horse, and 17% (2,500) in the former Berkshire authorities (half in West Berkshire). A further 9% (1,300) work in Gloucestershire, and around 7% (1,000) work in each of London and the former Avon authority areas (with half of the latter in Bristol).

Table 4.3: Census residence/workplace travel modes

Mode	Swindon			South West	England
	All	Workplace in	Residence in		
Train	1%	1%	1%	1%	8%
Bus	8%	8%	8%	4%	8%
Motorcycle	2%	2%	2%	2%	1%
Car driver	63%	67%	64%	68%	61%
Car passenger	8%	8%	8%	7%	7%
Taxi	1%	1%	1%	0%	1%
Bicycle	5%	5%	5%	4%	3%
Walking	11%	10%	11%	14%	11%
Other	0%	0%	0%	1%	1%

Source: Census 2001 (extracted from Swindon Transport Strategy Issues Report)

4.68 Around 86% of people who live in Swindon and work outside the Borough commute by car. This proportion is similar across most of the significant workplace destinations noted above. A number of key locations have relatively high public transport usage by Swindon residents who work outside the town. Unsurprisingly, these are the main urban centres. For instance, London, Reading, Bath and Bristol have rail mode shares of 35%, 25%, 17% and 12% respectively for Swindon-based commuters, with around 8% of Swindon residents who work in both Oxford and Chippenham also commuting by train. Out-commuting by bus is predominantly to areas close to Swindon.

4.69 With 108,000 workplaces, Swindon residents account for 74% of the total workforce, leaving some 28,500 workplaces in Swindon filled by in-commuters who live in other areas, an imbalance of 14,000 in-commuters to Swindon compared to out-commuters. Of these, some 49% (6,000), and some 13% of all workers in Swindon, live in Wiltshire. Unsurprisingly, almost half of Wiltshire residents who work in Swindon live in North Wiltshire. There are consequently some 2,000 more people working in Swindon and living in Wiltshire than the reverse, with those commuting into Swindon tending to travel further.

4.70 Some 4,500 people live in Gloucestershire and work in Swindon, the greater majority (80%) in the Cotswold and Stroud Districts, though around 800 live in Cheltenham and Gloucester. Oxfordshire residents make up around 10% of Swindon's in-commuters (2,800 people), with more than half of these being residents of the Vale of White Horse. It is noticeable that, whereas the balance of commuting between Swindon

and Oxfordshire is remarkably even (with only approximately 100 more in-commuting to Swindon), there is a marked imbalance with Gloucestershire, with over 3,000 more people living in Gloucestershire and working in Swindon than vice versa. Similarly, there is a net in-commute to Swindon from the former Avon area, with 1,200 more residents of this area working in Swindon than vice versa.

4.71 Conversely, the balance of commuting between Swindon and places to the east of Swindon is generally reversed from that noted for places to the west. For instance, some 2,500 Swindon residents work in the former Berkshire authority area, but only around 1,300 people who live in this area work in Swindon. Similarly, 1,000 Swindon residents work in London, but only 500 London residents work in Swindon.

4.72 Transport modes used by in-commuters to Swindon are broadly similar to residents working outside the Borough, with some 89% of people using cars and 9% public transport. Public transport use is most significant from locations on the main railway lines into Swindon or close to Swindon on key bus routes. For example, 43% of people who commute from London do so by public transport (mostly by rail). Some 17% of commuters from the former Avon area travel by train (over 30% from Bath), with 18% from Oxford and 16% from Chippenham. Around 9% of people who live in Wootton Bassett or Cricklade use buses to get to work in Swindon.

4.73 Employment is relatively evenly distributed within Swindon. Table 4.4 shows the number of workplaces in areas of Swindon (areas are shown in Figure 4.2), with 92% located in the urban area. Table 4.5 has a similar breakdown of Swindon residents, showing the way that residents of areas of Swindon are distributed, as well as their overall workplace location patterns. Table 4.6 shows selected matrices of resident and workplace movements within Swindon, by car, public transport and walk/cycle.

4.74 Of the individual areas shown, the largest numbers of workplaces is in West Swindon, though only a small amount more than in Swindon Centre. Old Town, Okus & Kingshill and Rodbourne & Even Swindon are also significant areas. Located as they are between West Swindon and the Centre, this means that 53% of employment in Swindon Borough is located in the western half of the town. Whereas 74% of Swindon's workforce lives in Swindon, it can readily be seen from Table 2.4 that most areas include a significant amount of 'in-commuting' that includes people who live in Swindon, but in a different area to their workplace.

4.75 Over 85% of the Swindon Centre workforce comes from origins within Wiltshire, with over 70% from within Swindon itself. Comparatively few people live in Swindon Centre, but almost 11,000 Swindon residents work there, with around 4,000 commuting from outside the Borough. Swindon Centre is less car-orientated than Swindon as a whole, with 46% of workers using cars, 26% public transport and 17% on foot or by bicycle. The majority (90%) of bus trips are made by Swindon residents, while the majority of train trips are undertaken from further afield, including, including Bristol, Bath and Chippenham.

4.76 West Swindon is a more significant residential area, and as such almost 5,000 people both live and work in the area. Just over 11,000 commute into West Swindon, and of these some 5,500 come from other parts of Swindon; including 1,500 each from North Swindon and eastern areas (Covingham & Dorcan, Walcot & Lawn and Stratton), 1,000 from central areas north of the railway (Rodbourne & Even Swindon

and Gorse Hill & Pinehurst) and 800 from central areas south of the railway (Old Town, Okus & Kingshill and the centre).

4.77 Modes used to access workplaces in West Swindon vary according to residential location, with cars dominating many of the significant origins (such as North Swindon, from where 86% who work in West Swindon use cars), although some of the historic areas of Swindon have a higher public transport or cycle mode share. For example, almost 15% of people living in Walcot & Lawn and working in West Swindon travel by bus, and a further 6% by bicycle.

4.78 Figures 4.3, 4.4 and 4.5 (extracted from the Swindon Transport Strategy show the origins (of workers in Swindon), destinations (of residents of Swindon) and linkages within Swindon, respectively. Figure 4.5 graphically shows the distribution of residents and workplaces as illustrated in Tables 4.4 and 4.5.

4.79 Other key points from the Census 2001 travel statistics are

- 52% of employed population travel between 0.1km and 5km to access a workplace; a significantly greater proportion than in the southwest of England and Wales (40%-44%) – Swindon already has a ‘history’ of a large number of shorter distance journeys being made.
- Less than 10% of employees report regularly working from home, compared with 16% in the south west – flexible and home-working is not so much part of the employment type or culture within Swindon
- 63% of journey to work trips undertaken by car (68% South West average) and 8% of journey to work trips undertaken by bus (4% South West average) – showing Swindon travel behaviour is already more sustainable than average and so likely to be able to influence choice more easily

## **Accessibility**

4.80 Accessibility to key services is a central component in overcoming social exclusion; in particular this relates to the availability of health facilities, education, employment, affordable food and (to a lesser extent) leisure facilities. In this wider social exclusion context it is therefore important to consider that accessibility is not simply the ability to get to places by bus (or other means), but the conceptual availability of services where and when they are needed; so, for instance, this could include mobile or on-line services. In the context of this study though, accessibility relates mostly to the ability to travel around the town, in order to reach the locations of key services.

4.81 Notwithstanding adverse comments about some features of bus services in Swindon, accessibility in the town is relatively good. The bus network provides good physical coverage of the urban area, and it is possible to get to central areas (in particular) in reasonable time from most of the town. However, Swindon Transport Strategy consultation responses noted that there is a specific problem with travelling north to south across the town.

4.82 Table 4.7 shows the main accessibility indicators as derived initially for LTP2, and re-calculated in 2008 with 2007 bus services and locations (such as new schools) and in 2010 with 2009 information. This shows that accessibility in Swindon by public transport is reasonably good overall, although there are some relatively long journey times for significant numbers of people to the hospital.

4.83 For instance, only around 50% of all households in the Borough can get to the hospital within 30 minutes travelling time, using, although almost all can within 60 minutes (2009 figures). Access to the town centre reflects the focus of the bus network on routes to the centre, and around 90% of households are within 30 minutes of the town centre by public transport; a greater proportion of households without access to a car have access (just over 95%).

4.84 To illustrate accessibility graphically, Figure 4.6 shows accessibility to the Swindon town centre, as a series of journey time contours. Accessibility to other key services is also important as noted earlier, and as an example, Figure 4.7 shows accessibility to workplaces and Figure 4.8 to the hospital. It should be noted that these contour maps show the shortest journey time to the nearest relevant location, which may not be the 'best' (or chosen) destination. As such, the limitations in orbital journey opportunities afforded by the bus network may not be apparent.

4.85 Local Area Agreement Indicator NI175 measures access to services and facilities by public transport, walking and cycling. Swindon Borough Council's uses a component of this indicator, defined as 'bus stops and interchanges which meet standards for access by disabled people'. The baseline is a 24.4% (dated 2006/07) accessible bus stops with targets of 40.2% in 2010 and 46.5% at the end of 2011.

4.86 54 areas in England have included NI175 in their priorities, including all except three of the transport authorities in the South West (these being North Somerset, South Gloucestershire and Wiltshire). The way that this indicator has been incorporated by the authorities makes it difficult to compare with Swindon, as different elements have been used. For instance, Bristol City Council's NI175 looks at accessibility to health facilities and employment sites, by non-car households and all households respectively.

## **Traffic in Swindon**

4.87 The Swindon Transport Strategy considered traffic flows in Swindon in detail, including derivation of a Base Year (2006) and Future Year (2026) traffic models of the town, in the AM and PM peaks.

4.88 The Base Year model shows that the heaviest congestion during the AM peak occurs mainly on the western and eastern approaches into Swindon. In total there are six sections of the road network that experience this level of heavy congestion. The two main locations are accessing M4 Junction 16 and sections of the A420 within Swindon (west of the A419).

4.89 There are numerous other locations that are also congested, where traffic is regularly delayed on key corridors throughout the town. Indeed, many junctions suffer from some form of congestion-related delay in the AM peak. Key locations include:

- Dorcan Way,
- Marlborough Road B4006;
- Thamesdown Drive B4534; and
- Cricklade Road A4311 (which provides the main route to the town centre directly from the north)

4.90 During the PM peak, congestion is less wide-spread than in the AM peak and there are fewer congested locations. The Swindon Transport Strategy contends that this is as would be expected, as the AM peak is a more marked peak. The most heavily congested parts of the network in the PM peak are:

- Wootton Bassett Road A3102 (east of the railway line); and
- Junction of Hyde Road and Kingsdown Road (north east of the town centre).

4.91 Other areas where PM peak congestion is notable include Mannington roundabout (and other junctions on Great Western Way), Cricklade Road, and Drakes Way/A420 corridor.

4.92 The Swindon Transport Strategy also contains a number of consultation responses relating to traffic congestion. It is particularly apposite to note that consultees generally suggest that the current situation is going to worsen. Some of the main specific issues identified included:

4.93 While peak hour congestion is severe, particularly between 08:45 and 09:00, outside the peaks it is not such an issue.

- Traffic congestion affects certain centres and locations, but is unpredictable in the places it affects and the times at which it occurs.
- North-south movements are subject to worse traffic congestion (e.g. crossing Great Western Way) than the town centre.
- Congestion is felt to be exacerbated by various features of roads and traffic in the town, including: the 'school run', location of town centre car parks, signage in the town centre, lack of a ring road (east-west through traffic goes through the town), poor connectivity between North Swindon and the rest of the town, quantity and timing of traffic lights in the town centre and parked cars.
- Traffic congestion itself was felt to particularly impact upon: reliability and punctuality of buses and community transport services, residents' quality of life and health (due to pollution associated with heavy volumes of traffic and safety issues associated with rat-running) and local air quality and pollution levels.
- Congestion and poor accessibility may discourage businesses from locating in Swindon.
- Rat-running through residential areas was also recognised as an effect of congestion on main routes.

### **Strategic Highway Links**

4.94 Swindon is well-located on the motorway network, being immediately adjacent to the M4, with two junctions serving the town, one at its eastern edge (junction 15) and the other (junction 16) to the west. The A419 runs north-south, broadly along the eastern edge of the town, continuing north (as the A417 from Cirencester) to join the M5 near Gloucester (junction 11A).

4.95 The Highways Agency (HA) identifies that key junctions on the M4 and A417/A419 will need to be carefully managed, as development in the future has the potential to affect journey time reliability. One of the HA's Public Service Agreement (PSA) targets relates to journey time reliability, and the target will be achieved if the average vehicle delay associated with the slowest 10% of daytime journeys on defined

routes is lower than the base period (Aug'04-Jul'05). The defined routes include the M4 past Swindon and the A417/A419 from Swindon to Brockworth.

4.96 Sections of the A419 around Swindon (from White Hart Roundabout to the M4) record significant delay both overall (annual delay was over 100,000 vehicle hours per annum in 2006) and per vehicle (60-75 seconds). In addition, north of Swindon, significant delay is recorded on the A417 between Cirencester and the M5, in particular between Cowley and Brockworth, with average delays of over 75 seconds per vehicle in 2006. The M4 around Swindon does not regularly experience such delays.<sup>18</sup>

4.97 Within a given day, journey times on the A419 around Swindon can be 10%-25% above the minimum recorded in free-flow conditions (the morning peak is the worst period). Evening peak journeys are generally less likely to be delayed, with journey times 5%-10% above free-flow. Delays can be experienced in either northbound or southbound directions.

4.98 An alternative view of traffic conditions used by the HA is the concept of 'stress'.<sup>19</sup> In the South West, there were a number of sections of road with high stress levels. In general, these are small sections with particular locational features or issues. None are near Swindon, though the A417 between Little Witcombe and the A436 is included.

4.99 A number of specific issues have been identified on the A419 in connection with work to evaluate the impact of the Eastern Development Area (EDA) on the A419. While many relate to the effect that EDA traffic could have on the A419 and its associated junctions, they also identify some (primarily safety-related) issues with the road's current form. In general terms, these stem from the road's multi-purpose role as a strategic route and access to/from eastern Swindon.

4.100 For instance, junction separation is identified as an issue between Commonhead and M4 junction 15 and, allied to this, southbound queuing at Junction 15 is prevalent in the peaks, which also affects journey time reliability. Weaving between Commonhead and the Dorcan slip (northbound only) presents potential safety problems, as does peak time queuing from White Hart roundabout on the southbound off slip. The adequacy of visibility and slip suitability is also queried in a number of locations.

4.101 The accident record of the A419 largely accords with these issues. Over the last five years, there were 101 injury accidents between Blunsdon and the M4 (November 2004 to October 2009). Of these, 91 were slight, with 9 serious and 1 involving a fatality. The accidents are located along the length of road, but with stronger clusters around the junctions, particularly those noted with specific issues.

## Parking

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<sup>18</sup> 'Regional Network Report for South West – 2008', Highways Agency

<sup>19</sup> Highway stress – simply expressed, this is the daily flow divided by the daily capacity. Flow is determined from counters and expressed as Annual Average Daily Flow (AADT). Daily capacity is based on the maximum sustainable flow in the peak hour, but lower values outside these times. As flows vary, it is therefore possible to achieve stress values above 100%. In general, roads that are congested for more than just the morning and evening peaks have stress levels over 100%. Where this occurs, the road is likely to be busy for substantial periods of the day.

4.102 The main issues identified in the Swindon Transport Strategy when considering car parking in Swindon were:

- Car parks located in a tight collar around the town centre – encouraging vehicle traffic directly into the heart of the town impacting on the pedestrian and cycle environment and public transport journey times;
- Existing Park and Ride sites underutilised;
- Dispersed nature of employment sites within Swindon and the diluted provision of employment within the town centre – not conducive to supporting long stay parking (Park and Ride) on the edge of town; and
- Car parking capacity at the railway station is restricted.

4.103 Pricing of parking in Swindon has recently been used to promote the town centre as a destination for shopping on the run up to Christmas 2009. In a temporary initiative which ran until early January 2010, reduced parking costs were offered in selected premium car parks for longer off-peak stays (£2-00 for a 4hr stay between 10:00am and 6:00pm). This initiative has been judged successful in attracting additional shoppers to the town centre.<sup>20</sup> These reductions have been continued during the run up to Christmas 2010 and into early 2011.

### **Walking and Cycling**

4.104 Walking and cycling are important local methods of making trips, with, for instance, almost 10% of Swindon residents walking to work and around 5% cycling (Census figures), though these proportions have declined from historic values as a result of the transfer of significant amounts of employment from concentrated central locations to more dispersed locations.

4.105 However, the patterns are not uniform across the town. Walking to work is unsurprisingly dominated by people who live and work in relatively close proximity. Some 15% of people who work in Swindon town centre walk to work, with the majority of people walking from the areas immediately adjacent to the centre, resulting much higher walk mode share proportions. For example, over 67% of the residents of Old Town, Okus and Kingshill who work in the centre walk to work.

4.106 Cycling is less popular, with around half the number of people cycling to work as walking. The pattern of cycling to work is also very different to walking, with areas that include some of the main out-of-centre employment locations having the larger numbers of cyclists to work than the town centre. For instance, around two thirds of people cycling to work are destined for Covingham & Dorcan, Gorse Hill & Pinehurst, Rodbourne & Even Swindon, Stratton or West Swindon. Residents of these areas are among the most likely to cycle to work, though (unlike walking) not necessarily to places of work in the same overall area.

4.107 Swindon has been developed (at least in the last 50 years) almost entirely to meet the needs of the private car. The comparatively low density of housing in newer areas of Swindon results in relatively long distances between residential areas and potential workplaces, retail areas or other facilities, all of which is not particularly conducive to walking or cycling. This is compounded when combined with a generally poor pedestrian environment and streetscape.

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<sup>20</sup> 'Swindon News', Issue 82, December 2009, Swindon Borough Council

4.108 The main issues identified in the Swindon Transport Strategy when considering walking and cycling in Swindon were:

- Declining proportion of work trips undertaken on foot and by bicycle;
- High car ownership; convenience of use;
- Rail line dissecting the town centre from the north of Swindon;
- Highly permeable network of streets, but difficult to navigate; and
- Major roads, large junctions and roundabouts not conducive to walking and cycling.

4.109 Consultation for the Swindon Transport Strategy identified a number of issues relating to walking and cycling, in particular cycling. The key points included the lack of priority facilities for cyclists in a number of locations or corridors.

4.110 Cycling and walking remained activities which many people would like to participate in more often if the perceived barriers were removed. In particular the health benefits of regular exercise were recognised. Including “active travel” in daily activities was seen as a good way of taking exercise to improve health and reduce obesity amongst both adults and children.

Table 4.4: Census – workplaces in Swindon

<b>Area of Swindon</b>	<b>Total workplaces in area</b>	<b>In-commute to area</b>	<b>Also live in area</b>	<b>Work at home</b>	<b>Live in Swindon (not area)</b>
Swindon Centre	15,652	15,335	317	57	10,737
Blunsdon	2,327	1,978	349	161	1,411
Covingham & Dorcan	7,511	5,135	2,376	601	3,805
Gorse Hill and Pinehurst	8,156	6,784	1,372	369	4,987
Highworth	2,189	976	1,213	345	502
North Swindon	4,404	1,753	2,651	1,095	1,213
Old Town, Okus & Kingshill	13,393	10,613	2,780	667	6,712
Ridgeway	998	567	431	232	372
Rodbourne & Even Swindon	11,387	9,904	1,483	306	6,771
South Marston	7,108	6,933	175	69	4,603
Stratton	9,839	7,215	2,624	701	5,336
Walcot & Lawn	5,560	3,869	1,691	577	2,597
West Swindon	15,985	11,089	4,896	1,029	5,552
Wroughton and Chiseldon	3,049	1,757	1,292	429	821
<b>All Swindon BC</b>	<b>107,558</b>	<b>28,489</b>	<b>79,069</b>	<b>6,641</b>	<b>79,069</b>

Table 4.5: Census – residents of Swindon

<b>Area of Swindon</b>	<b>Total Residents (who work) in area</b>	<b>Out-commute from area</b>	<b>Also work in area</b>	<b>Work at home</b>	<b>Work in Swindon (not area)</b>
Swindon Centre	883	566	317	57	443
Blunsdon	1,138	789	349	161	543
Covingham & Dorcan	9,652	7,276	2,376	601	5,998
Gorse Hill and Pinehurst	6,527	5,155	1,372	369	4,311
Highworth	4,412	3,199	1,213	345	2,231
North Swindon	15,777	13,126	2,651	1,095	10,414
Old Town, Okus & Kingshill	9,280	6,500	2,780	667	4,976
Ridgeway	1,503	1,072	431	232	676
Rodbourne & Even Swindon	5,228	3,745	1,483	306	3,181
South Marston	592	417	175	69	330
Stratton	9,601	6,977	2,624	701	5,741
Walcot & Lawn	8,836	7,145	1,691	577	6,085
West Swindon	15,668	10,772	4,896	1,029	8,084
Wroughton and Chiseldon	4,476	3,184	1,292	429	2,406
<b>All Swindon BC</b>	<b>93,573</b>	<b>14,504</b>	<b>79,069</b>	<b>6,641</b>	<b>79,069</b>



Table 4.7: LTP2 Core Accessibility Indicators Public Transport Journeys

Destination	Indicator (all Public Transport & Walk)			2006			2007			2009		
	Time Period	Population	Interval (mins)	number	%	SBC total	number	%	SBC total	number	%	SBC total
Primary Schools	Tue 07-09:00	Pupils of compulsory school age	15	29,564	98.0%	30,155	29,988	98.0%	30,596	30,785	97.6%	31,541
			30	29,878	99.1%	30,155	30,311	99.1%	30,596	31,043	98.4%	31,541
Secondary Schools	Tue 07-09:00	Pupils of compulsory school age	20	27,643	91.7%	30,155	27,464	89.8%	30,596	27,677	87.7%	31,541
			40	29,864	99.0%	30,155	30,297	99.0%	30,596	31,042	98.4%	31,541
Further Education	Tue 07-09:00	People aged 16-19	30	7,682	90.1%	8,527	7,837	90.7%	8,642	8,433	94.9%	8,888
			60	8,452	99.1%	8,527	8,564	99.1%	8,642	8,789	98.9%	8,888
Work (3+ locations)	Tue 07-09:00	People of working age (16 to 74)	20	114,560	82.5%	138,904	117,557	83.2%	141,236	120,883	82.7%	146,196
			40	137,452	99.0%	138,904	139,743	98.9%	141,236	144,091	98.6%	146,196
Work (6+ locations)	Tue 07-09:00	People of working age (16 to 74)	20	92,646	66.7%	138,904	95,102	67.3%	141,236	93,541	64.0%	146,196
			40	137,388	98.9%	138,904	139,675	98.9%	141,236	144,060	98.5%	146,196
Hospital	Tue 10-12:00	Households	30	40,130	50.4%	79,561	39,847	49.3%	80,897	42,151	50.3%	83,726
			60	78,642	98.8%	79,561	79,959	98.8%	80,897	82,649	98.7%	83,726
		Households without access to a car	30	10,665	62.3%	17,132	10,579	61.0%	17,345	10,901	61.3%	17,778
			60	17,066	99.6%	17,132	17,276	99.6%	17,345	17,696	99.5%	17,778
GP surgery	Tue 10-12:00	Households	15	76,057	95.6%	79,561	77,337	95.6%	80,897	80,665	96.3%	83,726
			30	78,685	98.9%	79,561	80,000	98.9%	80,897	82,811	98.9%	83,726
		Households without access to a car	15	16,869	98.5%	17,132	17,177	99.0%	17,345	17,585	98.9%	17,778
			30	17,068	99.6%	17,132	17,278	99.6%	17,345	17,724	99.7%	17,778
Town Centre	Tue 07-09:00	Households	15	21,229	26.7%	79,561	21,718	26.8%	80,897	20,083	24.0%	83,726
			30	71,844	90.3%	79,561	71,986	89.0%	80,897	76,080	90.9%	83,726
		Households without access to a car	15	6,587	38.4%	17,132	6,718	38.7%	17,345	6,379	35.9%	17,778
			30	16,275	95.0%	17,132	16,456	94.9%	17,345	17,053	95.9%	17,778

Figure 4.2: Areas of Swindon

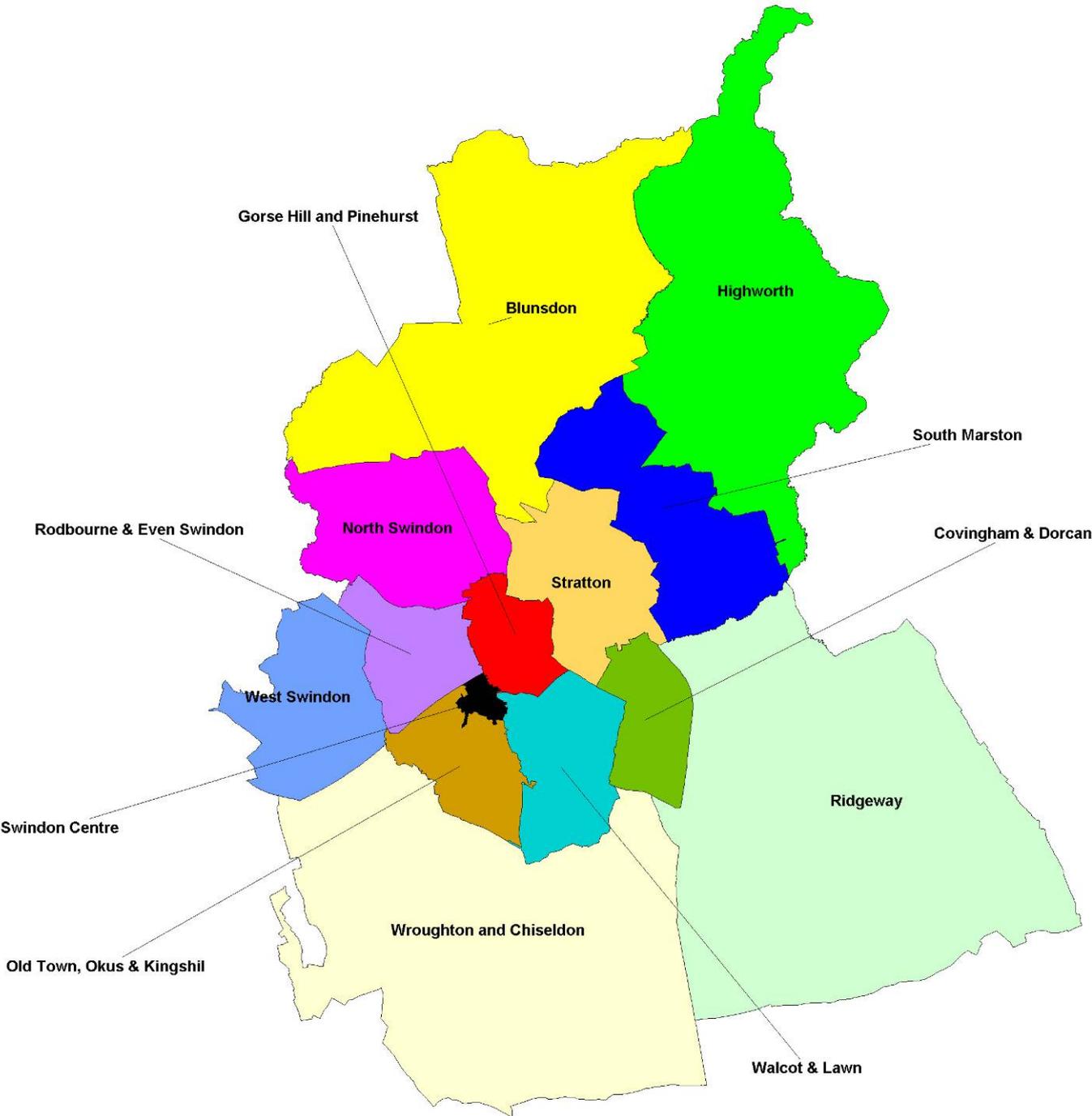


Figure 4.3: Workplaces in Swindon – car trips from residents outside Swindon

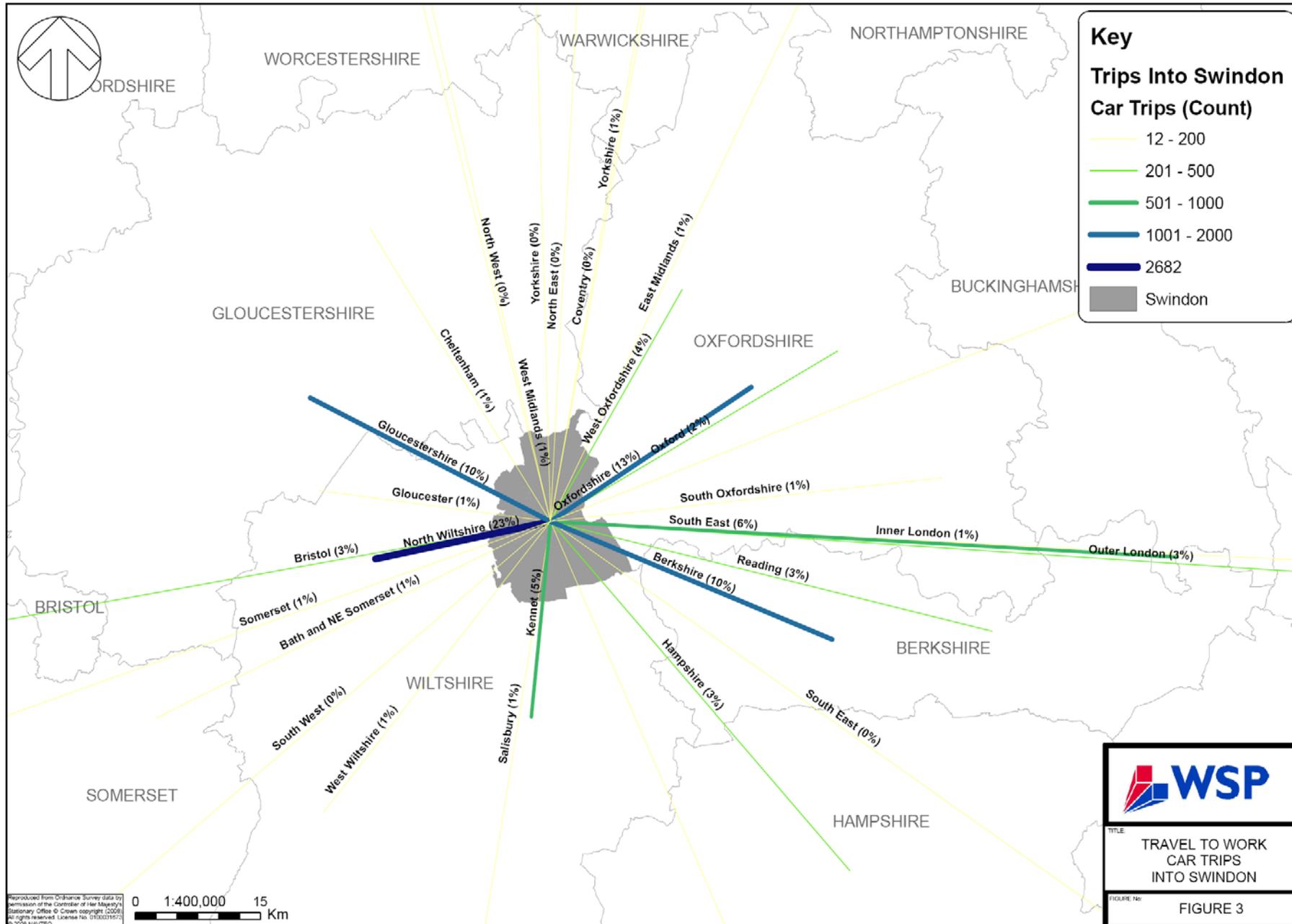




Figure 4.5: Residents of Swindon – work-related car trips within Swindon

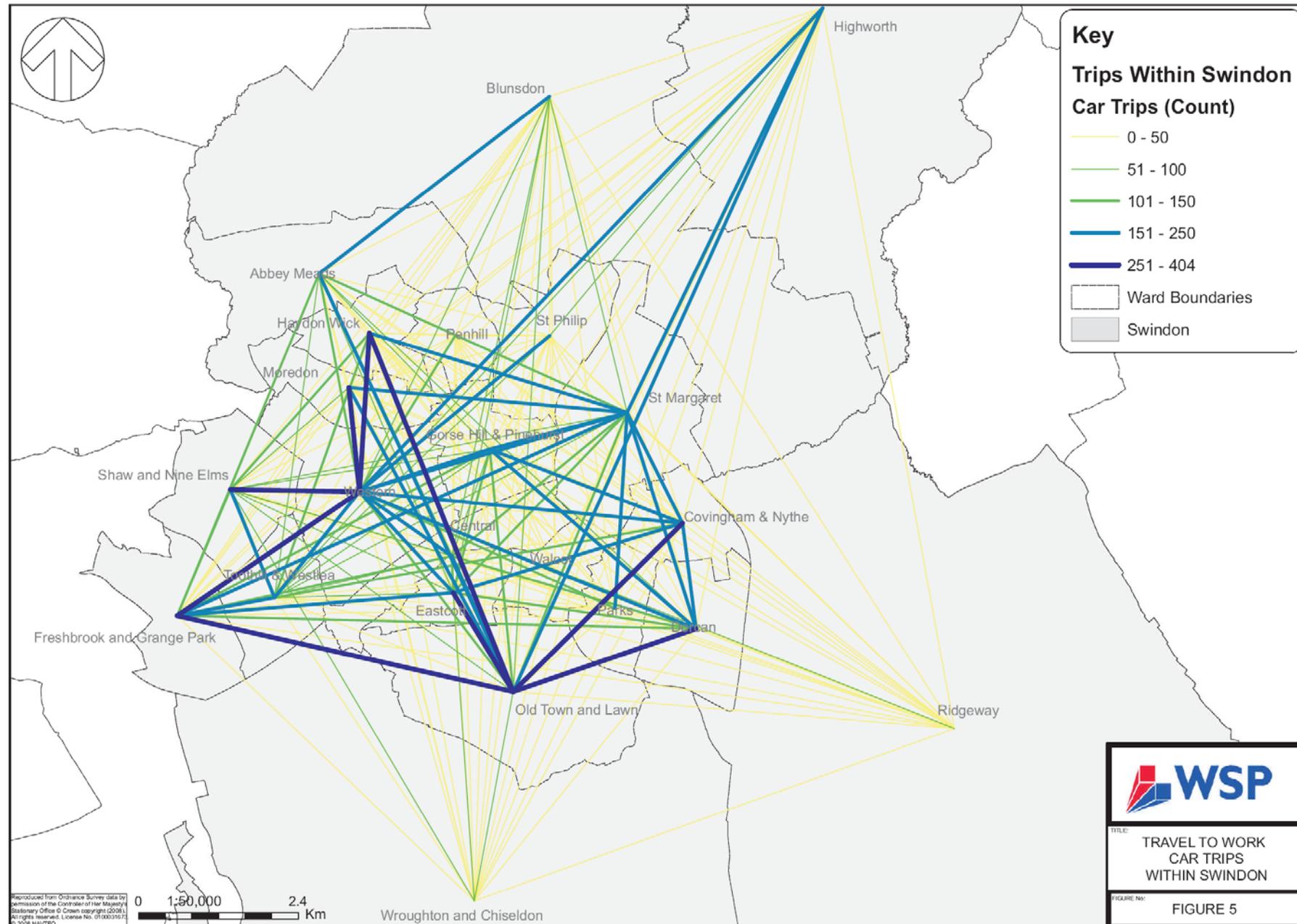


Figure 4.6: PT accessibility to town centre (Oct'09, Tuesday, 10:00-12:00)

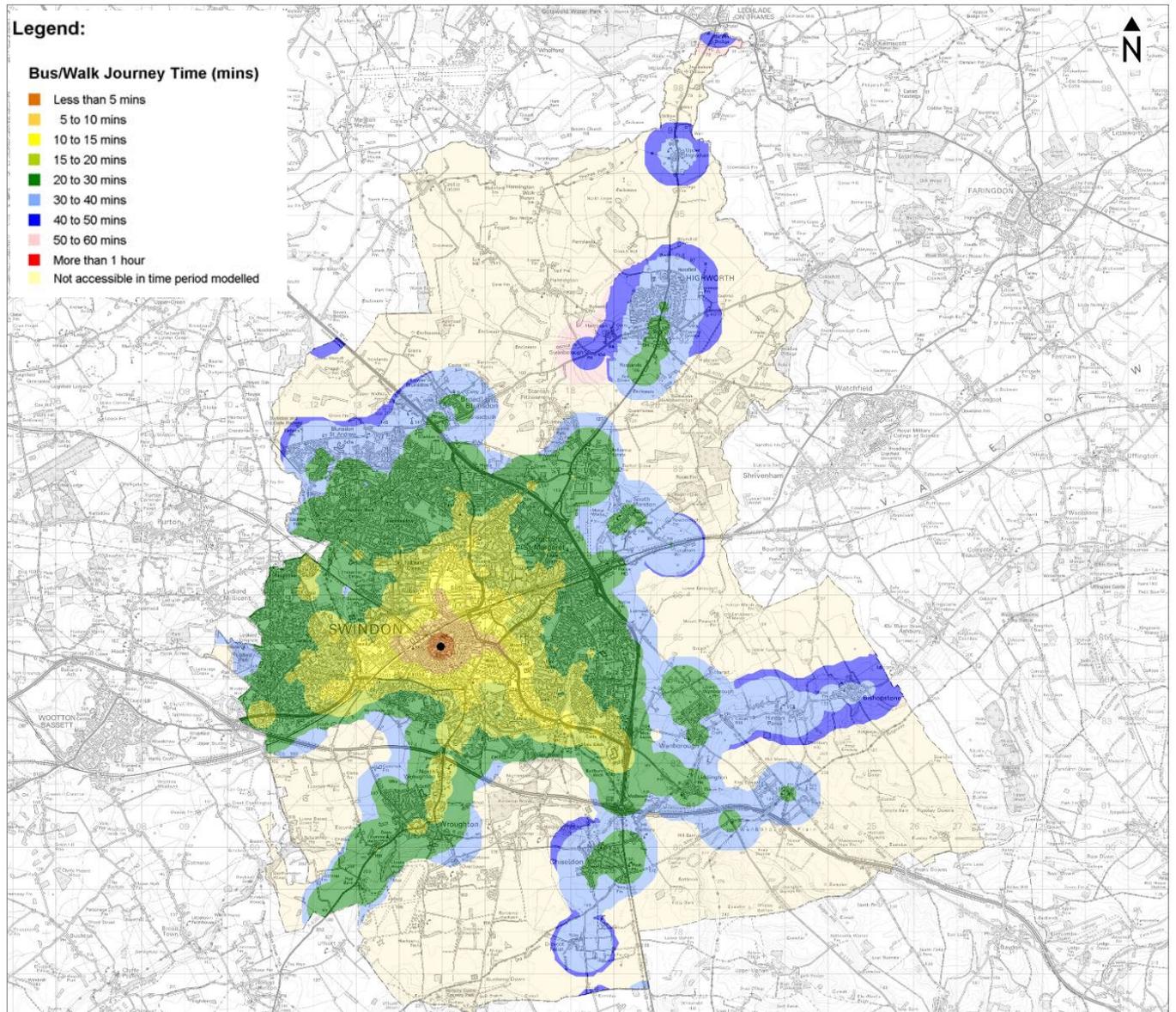


Figure 4.7: PT accessibility to workplaces (Oct'09, Tuesday, 07:00-09:00)

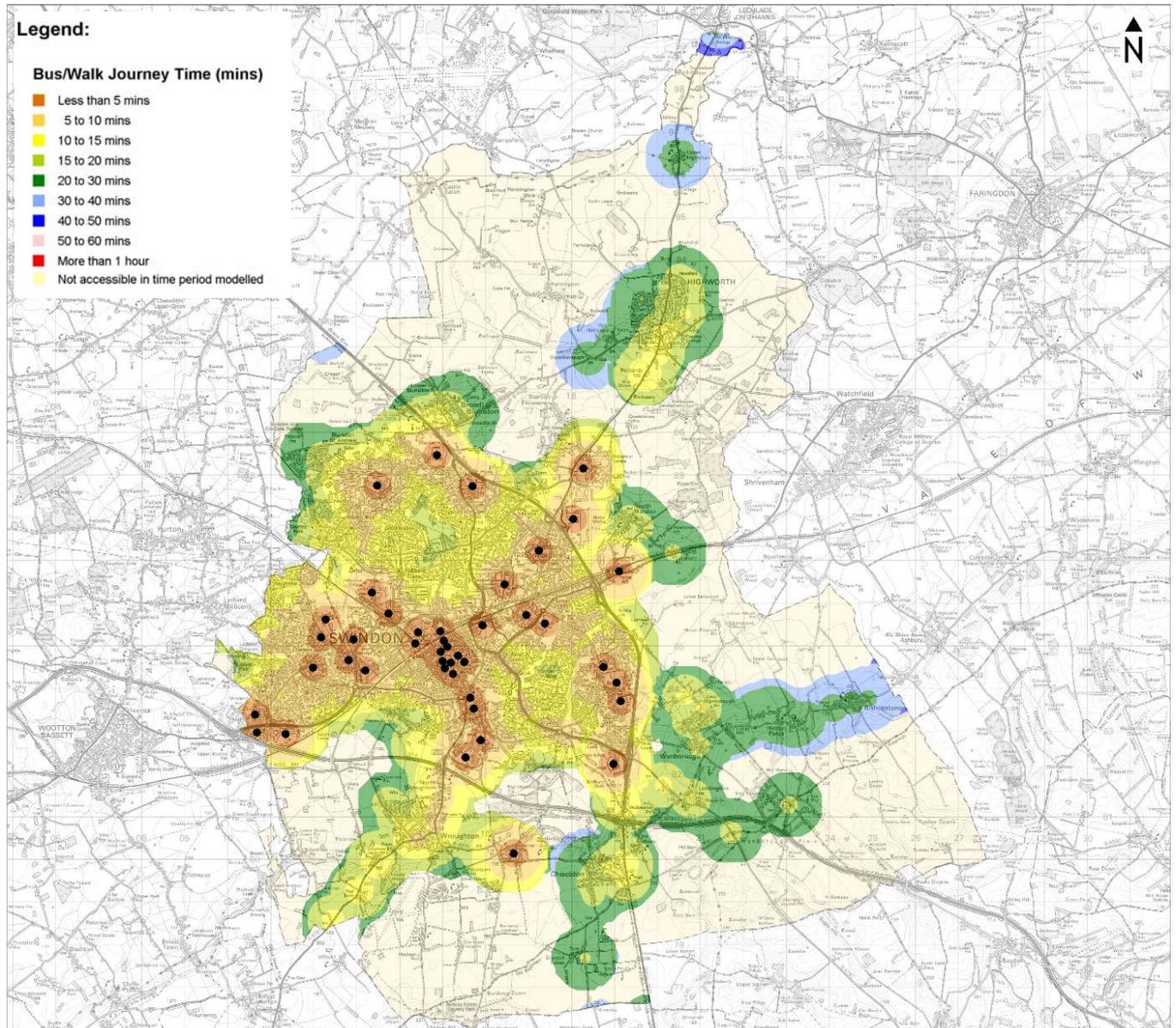
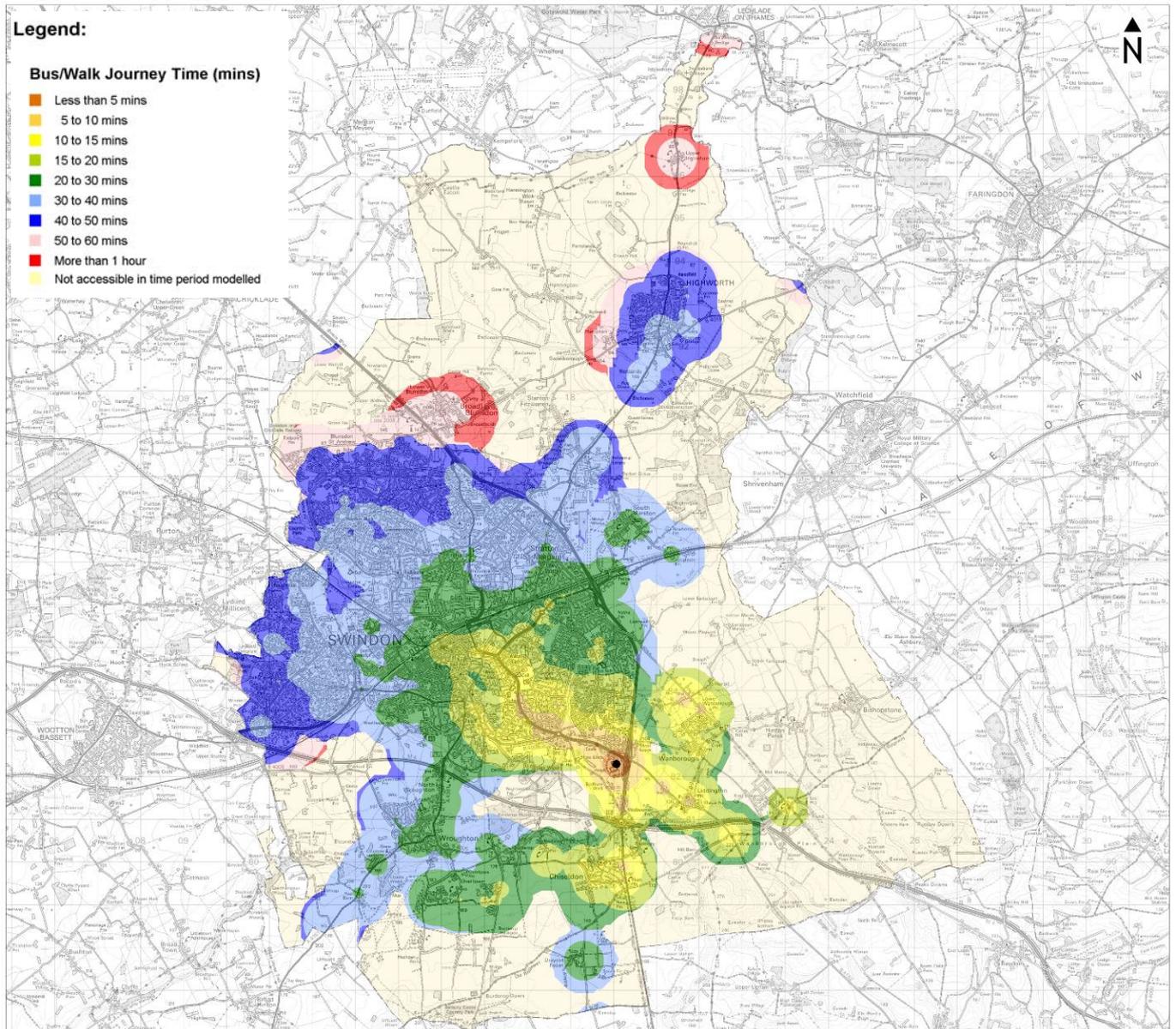


Figure 4.8: PT accessibility to Great Western Hospital (Oct'09, Tuesday, 10:00-12:00)



## Looking Ahead

### Background

4.111 The draft Regional Spatial Strategy for the South West 2026 (RSS) and the Regional Economic Strategy (RES) confirmed that Swindon has a role as a key regional economic driver. Swindon was given 'New Growth Point' status, and as such would accommodate substantial housing and employment growth over the RSS period to 2026, indeed the third highest in proportionate terms amongst the Strategically Significant Cities and Towns (SSCTs) in the region.

4.112 Between 22,000 and 32,000 additional jobs were forecast for the Swindon 'Travel to Work Area' (TTWA) by 2026. Along with the anticipated employment growth, the RSS included significant housing growth in Swindon, leading to 36,000 dwellings in total (including 3,000 dwellings located in Wiltshire in areas immediately adjacent to the Swindon urban area), with an additional 1,200 in the remainder of the Borough. The RSS considered that there was a need to balance the provision of housing and jobs to encourage more sustainable patterns of development.

### Core Strategy – Revised Proposed Submission Document – March 2011

4.113 The Local Development Framework (LDF) Core Strategy sets out the approach for accommodating additional housing and other development growth in Swindon in a sustainable way to 2026. It notes that the ability to provide for a significant level of growth is very much dependent on the provision of infrastructure and complementary regeneration, renewal and the completion of already committed developments. Swindon is committed to delivering a substantial number of new homes in the short to medium term, but in doing so these should be integrated well with the existing community.

4.114 An important component of the Core Strategy is the impact that any planned development will have on transport infrastructure throughout the Borough and beyond. The rate of development has been affected by the recent economic downturn, and build-outs of planned sites are behind the previously anticipated schedules. Some specific transport issues related to development could experience temporarily amelioration.

4.115 The Revised Proposed Submission Document has been produced following the Government's announcement of its intention to abolish Regional Strategies and allow local authorities to set their own targets for economic and housing growth. In response to this and widespread public concerns over the scale of growth at Swindon the Core Strategy now proposes a reduction in housing growth from the Regional Strategy target of 36,000 houses to 25,000 for the period 2006-26. There is more emphasis on creating places, such as the replacement of the proposed Eastern Development Area by a series of new villages to the east of the town. The Proposed Submission Document will go for public consultation in March 2011.

4.116 The Core Strategy now proposes 25,000 homes at an annual average of 1250 dwellings a year to be provided between 2006 and 2026 but phased as follows

- 850 per year between 2010 and 2016
- 1385 per year between 2016 and 2026

4.117 Housing will be distributed as follows (previous figures in brackets):

<b>Location</b>	<b>Dwellings</b>
Swindon Central Area	1,000 (3,500)
Within Swindon's existing urban area	4,480 (6,700)
Northern Development Area (which has been developing over the last 10 years or so)	3,970 (3,550)
Wichelstowe (formerly known as the Southern Development Area)	4,500 (4,500)
Commonhead (located south and west of Great Western Hospital)	900 (750)
Eastern Villages (Development Area) (east of the A419, between South Marston and Wanborough)	7,500 (12,000)
Tadpole Farm (adjacent to the Northern Development Area, immediately to the north of Tadpole Lane)	1,700 (2,000)
Rural Settlements	750

4.118 A site at Moredon Bridge has planning permission for 200 homes in Wiltshire, but adjacent to Swindon and counts towards meeting the housing needs at Swindon. Borough housing completions from 2006 to 2010 were 6,050.

4.119 To meet the forecast demand for additional workplaces as a result of the growth of the economy of Swindon, provision has been made in the Core Strategy for an additional 85,000m<sup>2</sup> of office space in Swindon Central Area, as well as 52.5 hectares of employment land in the Eastern Development Area (20 hectares), at Tadpole Farm (5 hectares), Commonhead (15 hectares) and Wichelstowe (12.5 hectares).

4.120 The LDF Core Strategy will be subject to public examination by an Independent Planning Inspector, to be followed by an Inspector's Report and then formal adoption.

### **Central Area Action Plan**

4.121 The Swindon Central Area Action Plan (2009 to 2016) is the first adopted Development Plan Document under the LDF. It provides a detailed framework for the regeneration and development of the centre of Swindon. The strategy seeks to make the centre of Swindon a regional centre. It recognises that there are currently separate areas that characterise the centre of the town and seeks to knit these together.

4.122 There are four core principles – design, sustainability, public realm and transport and movement.

- Design – this is geared towards securing high quality design and innovation. The relevance for the study is that design allows people to move around in a safe, predictable and convenient manner. This means addressing for example, the permeability of the ‘North Star’ quarter north of the railway line with the rest of the central area.
- Sustainability – this is geared towards sustainable construction standards and methods.
- Public Realm – (linked with ‘Design’) – securing the creation of safe, convenient, user-friendly and attractive routes throughout central Swindon. This means the creation of legible and well connected hierarchy of routes, the importance of gateways and to make streets more cycle and pedestrian friendly.
- Transport and Movement – the aim is to create a town centre that is easily accessible from all parts of Swindon, with pedestrian priority which provides a pleasant and safe shopping and leisure experience and a road network which discourages through traffic and reduces the amount of circulating traffic.

4.123 The Action Plan considers the centre of Swindon as five ‘character areas’; Swindon Town Centre, Railway Heritage Area, North Star, Central Swindon Residential Communities and Old Town. The primary focus of regeneration is on the Town Centre (which it is envisaged will expand from the current retail core centred on Regent Street to link to the railway station and include land immediately to the north of the railway (‘The Railway Corridor’), as well as south towards Old Town. Schemes to substantially rebuild areas of the centre are planned, primarily around Fleming Way (Union Square in ‘The Commercial Quarter’) and Princes Street.

4.124 The basic pattern of roads in the centre will largely remain, but there is strong emphasis on linkages, both using these corridors and crossing. For instance, a ‘Green Spine’ is envisaged through the town centre, linking North Star to Old Town, including a route through Hawksworth, crossing the railway to link into Fleming Way, Princes Street and Victoria Road.

4.125 The aim of these development proposals is to encourage more people into the centre of Swindon, to reinvigorate the town centre and to increase spending. The promoters of the development assume large numbers of people would travel to and from the centre by bus. Inevitably, however, this will place even more pressure on an already-congested highway network.

Without increased and substantial investment in the bus network, the increase will be even larger.

## Future transport issues

### Transport model forecasts

4.126 Future-year (2026) traffic modelling undertaken for the Swindon Transport Strategy indicated that significant growth in levels of traffic on the highway network would occur in both the AM and PM peak periods (48% and 42% increases in traffic respectively). This modelling work has assumed that the LDF Core Strategy is fully enacted in terms of residential and commercial development.

4.127 Table 4.8 shows summary network statistics for the Swindon Transport Strategy model in the 2006 base year and 2026 'reference case', in both the AM and PM peaks. The greatest growth is forecast to occur in the AM peak.

Table 4.8: Network Statistics

Parameters	AM peak			PM peak		
	2006	2026	change	2006	2026	change
Assigned trips (PCUs) <sup>21</sup>	49,468	73,309	48%	51,534	73,107	42%
Time spent queuing (PCU-hrs) <sup>22</sup>	1,862	4,707	153%	1,737	4,395	153%
Average speed (km/h)	41	34	-17%	44	36	-18%

Source: WSP-STC Final Report

4.128 As a result of this growth, the Swindon Transport Strategy forecasts in 2026 that there would be significantly more over-capacity highway links and junctions in Swindon, when compared to the base year of 2006. Junctions and links forecast to have high ratios of flow to capacity (RFCs) are located throughout Swindon, with a particularly high concentration in the town centre and in southern and eastern parts of the town, where significant development is proposed in the Eastern Development Area and Wichelstowe.

4.129 The Swindon Transport Strategy Issues Report notes that that links and junctions with high forecast RFCs are a direct result of the increase in highway-based travel associated with both residential and commercial development. However, it goes on to note that the potential for mode choice changes have not been fully incorporated in the basic forecasts. In essence, this could result in fewer over-capacity highway locations if some trips shift from cars to other modes.

4.130 Analysis of the environmental impact of the changes in travel demand was undertaken using outputs from the transport models to assess the level of pollutant emissions in the future year 'do minimum' scenario, to be

<sup>21</sup> PCU = passenger car unit: a basic unit of modelling for highway networks equivalent to the amount of space taken up by a car; so a bus could be 2 or 3 PCUs

<sup>22</sup> 1 PCU-hr is the equivalent of a single PCU travelling for 1 hour

compared to modelled conditions in 2006. Table 4.9 indicates that there are likely to be significant increases in all pollutants as a result of the forecast development.<sup>23</sup>

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<sup>23</sup> The 'do minimum' scenario is based on the continuation of existing transport policies, with no investment in increased levels of capacity.

Table 4.9: Forecast transport emissions

Parameters	2006	2026 Do Minimum	Difference (change 2026 to 2006)
CO (Carbon Monoxide)	2,572	4,336	+69%
CO <sub>2</sub> (Carbon Dioxide)	27,318	43,315	+59%
NOx (Nitrogen Oxides)	653	983	+51%
HC (unburnt Hydrocarbons)	467	779	+67%
Pb (Lead)	2.7	4.3	+59%
PM10 (Particulates less than 10 microns in diameter)	2.7	4.3	+59%

Source: WSP-STC Final Report

### Strategic Transport Networks – highways

4.131 The Highways Agency has used various methodologies to forecast potential future problems on its network, to provide a general overview forecast based on links and anticipated growth rather than specific details.<sup>24</sup>

4.132 This has indicated that stress levels<sup>25</sup> on the network will rise over time. In general, forecasts indicate that, whereas there are comparatively few small sections of the network in the present day that exhibit stress levels, in the future the sections that will have higher stress levels (over 100%) will be more widespread across the network.

4.133 In the Swindon area, both the A419 and M4 are forecast to have daily stress levels of between 110%-135% by 2016, rising to between 130%-150% by 2026.

### Strategic Transport Networks – rail

4.134 The draft Great Western RUS<sup>26</sup> sets out some short and medium-term plans for the railways around Swindon<sup>27</sup>. In the short term (to 2014), the RUS envisages the following elements that will affect Swindon's rail services:

- Intercity Express Programme (IEP) – new generation longer distance trains, including electrification of the line between London Paddington and Bristol/South Wales – begins in CP4;
- Upgrade the telecom system at Swindon Station – including CCTV, Customer Information Systems and the Public Announcement system;
- Switch and cross renewals –to be completed to the east of Swindon

<sup>24</sup> 'Regional Network Report for South West – 2008', Highways Agency

<sup>25</sup> Definition of 'traffic stress' in Chapter 2

<sup>26</sup> 'Great Western Route Utilisation Strategy (RUS) Draft for Consultation', Network Rail, Aug'09

<sup>27</sup> Note that 'short term' refers to the 5-year regulatory 'Control Period', Control Period 4 (CP4), which runs from April 2009 to March 2014. 'Medium term' refers to Control Period 5 (CP5) from April 2014 to March 2019.

- Swindon-Kemble track redoubling and signal upgrade – 12 mile section of track and upgrade of two signals on the route. Note that all the required funding is not yet committed to this scheme;
- Calling pattern changes – faster services between Reading and Swindon that do not call at Didcot Parkway;
- Track segregation at Wootton Bassett Junction – grade separation where Bristol and South Wales lines split (less developed project); and
- New platform at Swindon station – potential segregation of high speed services (less developed project).

4.135 In the medium term (to 2019), projects in the RUS are less well-developed, but include the following potential options affecting Swindon:

- West Wiltshire Corridor – new regular services from Westbury to Chippenham or Swindon;
- Additional rolling stock – nine additional vehicles for the Great Western franchise to lengthen 11 morning and evening trains to/from Bristol;
- The Great Western IEP fleet – fleet service from 2016;
- Bi-mode high speed trains – diesel and electric propulsion, which could operate increased London Paddington to Cheltenham services.
- Additional peak train – between London Paddington and Bristol; and
- Re-signalling of the rail network around Swindon – major renewal in CP5.

4.136 These schemes will assist rail access to/from Swindon. In particular, Kemble-Swindon re-doubling could facilitate local services between Swindon and Kemble, potentially including a north Swindon station. Although the RUS identifies this as an option, it also acknowledges that it has not been considered in detail.

## **Walking & Cycling**

4.137 Some of the main issues identified that affect walking and cycling in Swindon are likely to continue. For instance, the declining proportion of work trips undertaken on foot and by bicycle that has been observed over time is related to a number of factors, not least the density and locations of both residential and employment areas. While new development areas can be planned and designed to minimise the affects in these areas, changes to existing will depend on the ability deliver enhancement schemes, in particular any that deal with specific issue such as severance caused by the railway, major roads or the wider urban form.

4.138 The impact of habitual car use, made easier with high car ownership facilitating convenience of use, is seen to a great extent throughout the UK, particularly where distances are considered ‘too long’ for walking or cycling is perceived as ‘dangerous’ (or indeed if public transport is thought of as inadequate). This is a complex issue that also brings in general attitudes to transport and trip making, the price of public transport fares and fuel/parking for cars, and effectively cuts-across the ‘smarter choices’ agenda.

4.139 Implementation of smarter choices initiatives can help to directly encourage walking and cycling, as well as reduce motorised trips. As well as the direct transport-related benefits of this sort of approach, arresting the decline in (and indeed increasing) physical activity that goes along with walking and cycling has potential wide-ranging health benefits for society as a whole.

### **Future Challenges**

4.140 The future transport challenges in Swindon are, for the most part, an extension of the current problems and issues (and challenges) as set out earlier in this chapter. Unless these existing problems are alleviated in the short term, they will intensify and continue to affect the transport system into the medium to longer term.

4.141 On top of the existing problems, significant new development of residential and commercial land is projected for Swindon. This is forecast to significantly increase the population of Swindon, and with it the amount of transport demand on the transport networks is likely to go up.

4.142 The amount will depend to a great extent on the way that new developments are structured and link into the urban area of Swindon, and how the residents and users of those developments will choose to live, where they work, shop and seek leisure activities. For instance, good public transport, walking and cycling linkages to local leisure facilities could meet accessibility needs without having to use a car.

4.143 The aim for the Local Transport Plan going forward is to consider these forecasts in the light of options to encourage the transport system to best tackle the wider goals for the transport system set for it by DaSTS. The challenges for Swindon in the context of each of the DaSTS goals are set out in Chapter 6.

## 5 Spatial Planning

*This chapter sets out the spatial aspects of the Local Transport Plan in the context of the “Connecting People, Connecting Places” neighbourhood management strategy. It also describes sub-regional issues as they relate to neighbouring highway authorities and the Highways Agency.*

### Connecting People, Connecting Places

5.1 In 2008 the Borough Council established a new neighbourhood management strategy for Swindon based on a series of locality clusters. The resulting initiative, “Connecting People, Connecting Places”, is built on three guiding principles:

- Encouraging and enabling more meaningful engagement with Ward Councillors, people and communities.
- Promoting a sense of community.
- Developing public services that are more locally sensitive.

5.2 The aims are to

- Help communities do more for themselves
- Allow local communities to be more involved in setting and delivering priorities
- Develop meaningful conversations between communities and partners

5.3 It involves public services working together to change current policy, practice and organisational models to ensure that they support people in their local neighbourhoods to build better, more independent lives and stronger more sustainable communities.

5.4 Within the Borough, seven ‘cluster’ areas have been identified. The clusters are built around ward boundaries and “Connecting People Connecting Places” is a way of supporting elected members as representatives of their communities and as local leaders and decision makers. Elected members convene cluster forums with interested community champions and local people to discuss local issues and develop local solutions.

5.5 Each cluster has a Cluster Lead. Cluster Leads are existing, senior managers within Swindon Borough Council. The cluster leads act as facilitators, listening to people, gathering information and brokering local solutions. “Connecting People Connecting Places” is a partnership programme and Cluster Leads are working with their colleagues in partner organisations to share information and discuss how to work together with local people and communities. Partners include the Police, Fire service, Health and the Voluntary Sector.

5.6 In autumn and winter 2010 a series of workshops were arranged with each Cluster area as part of the process for developing the Core Strategy and the Local Transport Plan. These workshops asked for local opinions on how people would like to see their areas develop, what they saw as the key issues, and their main hopes and ambitions for what their local communities would look like in future years. The results have informed the preparation of the Core Strategy and Local Transport Plan.

5.7 The characteristics of each Cluster area are described below along with the main transport issues that are raised by the local communities (including those raised at the 2010 workshop sessions).

### **A. West Swindon Locality Cluster**

Covers the Wards of Freshbrook and Grange Park, Shaw and Nine Elms, Toothill and Freshbrook.

It includes

- Residential areas of Toothill, Westlea, Freshbrook, Grange Park, Eastleaze, Middleleaze, Shaw, Sparcells and Peatmoor.
- Employment areas of Rivermead, Hillmead, Windmill Hill, Blagrove, Westmead and Delta
- Retail facilities at West Swindon Centre, Mannington, and Bridgemead
- Leisure facilities at the Link Centre, Shaw Ridge, Delta Tennis Centre and Lydiard Park
- Local schools

Main transport infrastructure

- Main access routes to M4 Junction 16
- Mead Way corridor from north Swindon to Great Western Way
- Great Western Way from M4 Junction 16 to town centre including key junctions at Blagrove, Mannington and The Meads
- Tewkesbury Way and Whitehill Way
- Network of off road cycle tracks and footpaths segregated from the main road network (including National Cycle Network Route 45)
- Network of local bus services
- Longer distance bus services from west of Swindon.

The main trip attractors in the area are

- West Swindon District Centre (retail and other local facilities)
- Link Centre (leisure centre)
- Access to/from M4 at junction 16 and areas west of Swindon
- Employment areas at Blagrove, Windmill Hill, Westmead, Rivermead and Hillmead
- Lydiard Country Park

The main transport issues for the area are

- Congestion around M4 junction 16 at peak periods

- Impact on Swindon's transport network of future housing growth across the Borough boundary in Wiltshire
- Severance from the west caused by the M4
- Traffic congestion on main routes at peak times – particularly on Mead Way, and Wootton Bassett Road and at Blagrove roundabout, Mannington Roundabout and Meads Roundabout
- Footpath and cycle track network segregated from the road network create issues of safety and legibility
- Poor public transport access to many employment sites, facilities in North Swindon, and to Lydiard Park
- Public transport links to the town centre and the possibility of a park and ride site near M4 junction 16 and a tram or light rail system.

## **B. The East Swindon Locality Cluster**

Covers the Wards of Dorcan, Parks and Walcot.

It includes

- Residential areas of Park North, Park South, Walcot East, Walcot West, Eldene and Liden
- Employment area of Dorcan
- Retail facilities at Cavendish Square
- Leisure facilities at Dorcan School
- Education facility at New College and local schools

Main transport infrastructure

- Dorcan Way corridor
- Drakes Way corridor
- Queens Drive corridor including key junction at Coate Water
- A419 access at Wheatstone Road
- Network of off road cycle tracks and footpaths segregated from the main road network
- Network of local bus services
- Longer distance bus services from east of Swindon

The main trip attractors in the area are

- New College
- Dorcan employment area
- Cavendish Square (retail and other local services)
- Access to A419
- Access to/from town centre from areas east and north east of Swindon

The main transport issues for the area are

- Junction delays at peak periods on main roads
- Potential traffic impact of the proposed Eastern Development Area on existing communities
- Flood risk from highway drain overflow
- Severance caused by main roads

- Unattractive subways on walking and cycling network
- Inappropriate routes used by heavy goods vehicles around Dorcan area
- Noise impact of A419
- Verge parking in post war housing areas
- Lack of direct bus services to facilities in other parts of Swindon

### **C. The Town Centre Locality Cluster**

Covers the Wards of Central and Eastcott.

It includes

- The town centre and Old Town (part) retail, employment and service facilities
- Residential areas of New Town, Kingshill, and Broad Street areas
- Local schools
- Leisure facilities at the County Ground
- Retail facilities at Ocotal Way

Main transport infrastructure

- Rail Station
- Bus Station
- Town Centre and Old Town public car parks
- Local bus network
- Town centre ring road
- Town centre “Gateway” points at – Magic Roundabout, Transfer Bridges, Wootton Bassett Road bridge, Victoria Road.

The main trip attractors in the area are

- County Ground (football stadium)
- Town Centre retail locations
- Town Centre employment locations
- Wyvern Theatre
- Rail Station
- Bus Station
- Cross town road links
- Superstore at Ocotal Way

The main transport issues for the area are

- Availability of parking space in residents parking zones
- Impact of town centre regeneration on local communities
- Condition of public realm – dominance of traffic and quality of streetscape
- Safety issues related to transport, fear of crime and anti social behaviour
- Rat running through residential streets
- Numbers of buses running through Railway Village
- Severance to the north caused by the rail line and use of subways

- Local air quality adjacent to Kingshill Road
- Condition of Swindon bus station

#### **D. The North Central Locality Cluster**

Covers the Wards of Gorse Hill, Pinehurst, Penhill, Western.

It includes

- Residential areas of Gorse Hill, Pinehurst, Even Swindon, Rodbourne Cheney and Penhill
- Employment areas of Hawksworth, North Star, Cheney Manor, Barnfield, Kembrey Park, Elgin, Dunbeath and Gypsy Lane
- Retail facilities at Bridgemead, Gorse Hill and the Outlet Village
- Leisure facilities at Oasis and Steam Museum
- Education facilities at North Star College and local schools

Main transport infrastructure

- Cricklade Road/Cirencester Way Corridor
- Great Western Way Corridor between Meads and Transfer Bridges roundabouts including key junctions at Bruce Street Bridges and Cockleberry
- Local bus network
- Longer distance bus services from north of Swindon
- Swindon Rail Station
- Network of off road cycle tracks and footpaths segregated from the main road network

The main trip attractors in the area are

- Swindon College at North Star
- Oasis Leisure Centre
- Large number of employment sites
- Northern access to rail station
- Outlet Village (Retail)
- Gorse Hill (Retail area)
- Superstore at Bridgemead
- Main access routes from the north and along Great Western Way corridor from other areas

The main transport issues for the area are

- Public transport between the new Academy and Penhill
- Verge Parking in Penhill and Pinehurst
- Congestion hot spots at Gorse Hill, Bruce Street Bridges, Cockleberry, Transfer Bridges and Moonrakers
- Barrier to north – south movement caused by Great Western Way and the rail line – and the concerns about using subways
- Rat running through residential areas and inappropriate speeds
- Potential impacts on transport network of further growth

- Parking facilities in residential areas and around Gorse Hill shopping area
- Road safety on main routes and concerns about the design of traffic calming measures
- Provision of park and ride facility in North Swindon

## **E. The South Locality Cluster**

Covers the Wards of Old Town and Lawn, Ridgeway, Wroughton and Chiseldon.

It includes

- Rural areas to the south and south east of Swindon
- Villages of Wroughton, Chiseldon, Wanborough, Hinton Parva Liddington and Bishopstone
- Residential areas of Old Town, Okus and Lawn
- Employment at Pipers Way and Old Town and Great Western Hospital
- Leisure facilities at Coate Water Country Park, Barbury Castle and the Ridgeway
- Local schools

Main transport infrastructure

- M4 junction 15
- A419 north from junction 15
- A345 south from junction 15
- A4361 through Wroughton
- Marlborough Road / Queens Drive corridor including key junction at Coate Water
- Croft Road corridor
- Croft Park and Ride site
- Local bus network (including rural area services)
- Longer distance bus services from south of Swindon
- Old Town rail path
- The Ridgeway National Trail
- National Cycle Network Route 45

The main trip attractors are

- Old Town Core Area (retail and other services)
- Employment sites at Pipers Way, Burderop Park, Old Town Core area
- Great Western Hospital
- Access to A419 and M4 junction 15
- Coate Water Country Park
- Wroughton centre (retail and other services)
- Croft Park and Ride site
- Cross town trips through Old Town

The main transport issues for the area are

- Availability of parking in Residents Parking Zones in Old Town

- Impact on existing communities of new housing developments at Wichelstowe, Commonhead and Eastern Development Area
- Future viability of Croft park and ride site and other potential park and ride sites
- Hospital parking
- Direct public transport access to Hospital
- Overspill parking from Pipers Way employment sites
- Public transport facilities to Wanborough, Chiseldon, Thorney Park and other rural locations especially at evenings and weekends
- Peak time traffic congestion in Old Town Core Area, M4 junction 15 and around Pipers Way. Associated rat running through inappropriate streets
- Volume and speed of traffic on rural roads and villages
- Use of minor rural roads to access M4 junctions
- Condition and availability of footways in some rural areas and villages
- Parking facilities in some residential areas
- Potential for tram or rapid transit system

## **F. The North East Locality Cluster**

Covers the Wards of Covingham, Nythe, Highworth, St Margaret, St Philips.

It includes

- Rural areas to the north east of Swindon
- The town of Highworth and villages of Inglesham and Sevenhampton
- Residential areas of Upper Stratton, Lower Stratton, Nythe and Covingham
- Employment at Greenbridge, Gypsy Lane, Lower Stratton, Europa and South Marston
- Retail facilities at Greenbridge and Highworth town centre
- Local schools

Main transport infrastructure

- A361 from Swindon, north to Highworth and Lechlade
- A420 Oxford Road / Drakes Way Corridor including key junctions at White Hart and Greenbridge
- A419 access at White Hart junction
- Covingham Drive / Dorcan Way Corridor
- Local bus network
- Longer distance bus services from north and east of Swindon
- Crossing points of the main rail line and A420

The main trip attractors in the area are

- Greenbridge Retail Park
- Highworth Town Centre (retail and other services)
- Employment sites at Gypsy Lane and South Marston
- Freight distribution sites around Lower Stratton and South Marston
- Access to the A419

- Access to the A361 north and A420 east

The main transport issues for the area are

- Potential traffic impact of the proposed Eastern Development Area on existing communities
- Volume of Heavy Goods Vehicles - Highworth Road, Gypsy Lane, Swindon Road / Stratton Road
- Under utilisation of Key Point rail freight facility
- Flood risk from highway drain overflow
- Barriers created by railway line and A419
- Isolation from retail and employment sites
- Rat-running from Cricklade Road through Queensfield
- Accesses to the A419
- Peak time congestion at White Hart and Greenbridge junctions
- Public transport facilities in rural areas
- Noise impacts of A419
- Provision of park and ride facility in North Swindon
- Parking facilities in residential areas
- Missing links in the cycle network

### **G. The North Locality Cluster**

Covers the Wards of Abbey Meads, Blunsdon, Haydon Wick, Moredon.

It includes

- Rural areas to the north and north east of Swindon
- Villages of Blunsdon, South Marston, Stanton Fitzwarren, Castle Eaton and Hannington
- Residential areas of Moredon, Haydon Wick, Greenmeadow, and Abbey Meads
- Employment areas of Groundwell and South Marston
- Retail facilities at Northern Orbital Centre and White Hart
- Leisure facilities at Stanton Park and Blunsdon Abbey Stadium
- Local schools

Main transport infrastructure

- Thamesdown Drive
- A419 Blunsdon by-pass
- A420 Oxford Road
- Local bus network
- Network of off road cycle tracks and footpaths segregated from the main road network

The main trip attractors in the area are

- Northern Orbital Centre (retail and other local facilities)
- Blunsdon Abbey Stadium
- A419 access
- Employment sites at South Marston and Groundwell

- Freight distribution sites around South Marston
- A420 to and from Oxfordshire

The main transport issues for the area are

- Impact on existing communities of further housing growth
- Traffic signal timings on Thamesdown Drive
- Journey times by public transport to the town centre, the possibility of a tram or light rail system or greater use of the heavy rail network for local trips
- Traffic congestion and traffic management issues at key junctions
- Slow rate of adoption of new roads
- Parking concerns in new housing areas
- Severance caused by Thamesdown Drive and A419
- Flood risk from highway drains
- Impact of A419 Blunsdon by pass on local traffic
- Future use of old A419 alignment in Blunsdon
- Traffic speeds through villages
- Level of bus services in rural areas
- Provision of park and ride facility in North Swindon

5.8 In future it is suggested that the Cluster groups should be involved in prioritising maintenance and repair of the highway in their areas as part of the Localism agenda. They may also be involved in deciding on local transport scheme priorities, for example around road safety or cycling and walking. A proportion of the transport budget could be devolved to the Cluster areas as part of this process.

### **Sub regional issues**

5.9 Swindon has three neighbouring highway authorities, Wiltshire, Oxfordshire and Gloucestershire each of which is currently preparing a new Local transport Plan. Discussions have taken place with each neighbouring authority to identify cross boundary issues that exist for respective, emerging, Local Transport Plans.

### **Wiltshire Council**

5.10 The Borough Council has extensive joint working arrangements with Wiltshire Council in a number of significant transport related areas. These include –

- Wiltshire and Swindon Road Safety Partnership.
- Wiltshire and Swindon Freight Quality Partnership
- Wiltshire and Swindon Countryside Action Forum (Rights of Way)

5.11 In addition there is wider joint working as a result of shared structures for Police and Fire services through –

- Wiltshire Police Authority

- Wiltshire Fire authority

5.12 For Wiltshire the key cross boundary LTP issues are –

- Potential for improved rail services from south and west Wiltshire (particularly to increase use of the line through Melksham).
- Transport impact of housing developments to the west of Swindon (in both the Wiltshire Council and Swindon Borough Council areas). Provision of appropriate infrastructure.
- Issues around congestion and severance at M4 junction 16 and the impact of any revised proposals for the Wichelstowe development.
- Funding pressure on bus services in the Swindon travel-to-work area within Wiltshire.
- Transport impact of reviews of parking policies in each area (including town centre parking charges).

### **Oxfordshire County Council**

5.13 For Oxfordshire the key cross boundary LTP issues are –

- Transport impact on A420 of the Eastern Development area (including access to the A419 from the east).
- Housing expansion in Swindon being used as dormitory areas for car commuting to Oxfordshire workplaces.
- Impact of Heavy Goods Vehicle movements arising from Swindon on A420.
- Potential for new rail station(s) on Great Western main line to the east of Swindon.
- Rail electrification and rolling stock renewal.

### **Gloucestershire County Council**

5.14 For Gloucestershire the key cross boundary LTP issues are –

- Re-doubling of the Swindon to Kemble section of the Swindon to Gloucester line.
- Electrification and rolling stock renewal for the Great western main line.
- Impact of Heavy Goods Vehicle movements arising from Swindon on villages north of Swindon.
- North to South connectivity issues arising from congestion at the single lane section of the A417/A419 around Birdlip.
- Impact of growth on A419 around Swindon and potential impact on ease of access to M4 junction 15 from the north.

### **Highways Agency**

5.15 In addition discussions have taken place with the Highways Agency regarding matters of concern in the Swindon area as they relate to the strategic road network (ie M4 and A419). The development of sub-regional

transport policies and strategies requires a high level of co-ordination and integration between those public bodies involved in providing and managing networks. As the Agency responsible for the M4 and A419, the Highways Agency is a key stakeholder in relation to the development of the Local Transport Plan.

5.16 The major concern of the Highway Agency relates to the traffic impact of the proposed Eastern Development Area on the safe and efficient operation of the A419 and M4. Particular concerns exist in respect of the White Hart junction of the A419. Other concerns relate to the A419 junction at Commonhead and M4 junction 15. The Highways Agency are fully engaged with the Borough Council on assessing the potential traffic impacts of various scenarios for the Eastern development Area and are playing an active role in considering how these issues can be addressed.

5.17 The Highways Agency has a joint remit both to maintain the strategic functionality of the M4/A419 and to facilitate development. There is a need to ensure that the ambitious growth agenda within the Borough does not have a detrimental impact on the Strategic Road Network and there is concern that this fundamental challenge has not been formally recognised in any transport document produced by the Council.

5.18 The Borough Council is also working with the Highways Agency and other partners on proposals to re-configure M4 junction 16 as part of the Wichelstowe Development. There is also joint work in this area to promote sustainable travel modes to major employment sites in the vicinity of Junction 16 as part of efforts to reduce peak time congestion at the junction.

### **Future Spatial Strategy**

5.19 Below are the spatial corridors and gateways from the Swindon Transport Strategy that we are looking to bring forward for improvement through the Local Transport Plan.

5.20 The following transport corridors and gateways are identified for investment and improvement:

- Covingham Road / Dorcan Way
- Cricklade Road
- Great Western Way
- Marlborough Road / Queens Drive
- Mead Way
- Oxford Road / Drakes Way
- Thamesdown Drive / Oakhurst Way Corridor
- M4 Junction 15
- M4 Junction 16
- A419 White Hart, Commonhead and Turnpike Junctions
- Swindon rail station
- Swindon bus station



## 6 Implementing Key Goals

*This chapter relates the national transport policy framework (the DaSTS Goals) to broader local policy objectives. It places the DaSTS Goals in a local context and assesses the degree to which they can be prioritised locally. Each of the five DaSTS Goals is then discussed in detail, setting out the main themes, and the strategies to address these themes.*

6.1 The Local Transport Plan needs to consider, making use of available evidence, the relative importance of the national priorities for transport, ie the five DaSTS goals, for Swindon. As well as the national DaSTS goals the Local Transport Plan must also be based upon agreed local priorities. The local priorities for Swindon are set out in the Community Strategy “Vision for Swindon” and the “One Swindon” initiative.

6.2 Table 6.1 cross references the national transport policy framework (the five DaSTS Goals) with wider local policy objectives of the Community Strategy “Vision for Swindon” and “One Swindon”. This demonstrates the clear policy linkages from national to local level and how interventions on any particular theme can deliver across a number of levels.

Table 6.1: Compatibility between DaSTS goals and Local Priorities

<i>DaSTS Goals</i>	Support economic competitiveness & growth	Tackling climate change	Better safety, security & health	Promote greater equality of opportunity	Improve quality of life
<i>Community Strategy “Vision for Swindon” Themes</i>					
Swindon as ‘destination of choice’ and has the objective of making Swindon a national icon for growth on a sustainable basis.		●			●
Maximise the benefits to all Swindon people from a growing local economy, with a particular focus on technology, noting that investment in transport technology and the benefits that could be accrued from easier communications will need to be part of this.	●			●	●
The safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling.	●	●	●	●	●
A healthy, caring and supportive community that recognises provision of services and facilities, and accessibility to them.			●	●	●
A place where high aspirations are supported by superb education provision for all ages’, linking to the need for a skilled workforce and maximising benefits for all in a growing and high tech economy.	●			●	

A place where local people can have real influence and where they feel safe (in particular in relation to reducing road accidents).			•		•
<i>“One Swindon” Themes 2011-2014</i>					
We can all benefit from a growing economy and a better town centre.	•	•		•	•
I like where I live.	•	•	•		•
Everyone is enjoying sports, leisure and cultural opportunities.	•		•	•	•
Living independently, protected from harm, leading healthy lives and making a positive contribution.			•	•	•

6.3 Table 6.2 sets out the possible transport measures that can contribute to these local priorities. It is clear that many transport measures can contribute across a range of policy objectives.

6.4 In order to consider the relative importance of the five national DaSTS goals to local circumstances in Swindon a public consultation exercise was carried out in early 2010.

6.5 The questionnaire sought views on how people saw the priorities for transport, within the DaSTS framework. First of all they were asked to consider the relative importance of the overall DaSTS goals. For each DaSTS goal they were then asked about the relative importance of different themes within that goal.

6.6 Overall, the results of the survey indicated that 43% of respondents to the survey consider all the DaSTS goals to be of equal importance. Of those who identified their priority issues, ‘safety, security and health’ and ‘quality of life’ were the most important, each with around 60% of responses specifying one of these two goals as either their first or second priority.

6.7 Views on the importance of ‘economic growth’ were evenly distributed, with similar proportions rating it in each of the five priority levels offered in the survey. On the other hand, ‘climate change’ seems to have produced somewhat polarised opinions in the survey; for instance, whereas 34% rated it as the first or second most important issue, 32% stated it was their least important. ‘Equality of opportunity’ was suggested by respondents to be the least important, with almost 70% stating it was the fourth or fifth (last) priority.

6.8 The table below shows how each DaSTS Goal was ranked during the public consultation exercise.

Goal	Priority
Goal 4: To Contribute to better safety, security and health and longer life expectancy by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are	Top Priority

beneficial to health.	
Goal 5: To Improve the quality of life for transport users and non-transport users, and to promote a healthy natural environment	2nd Priority
Goal 1: To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change.	3rd Priority
Goal 2: To Support economic competitiveness and growth, by delivering reliable and efficient transport networks.	4th Priority
Goal 3: To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society.	5th Priority

6.9 The questionnaire went on to ask more detailed questions on each of the goals and interpreting what they mean in terms of service delivery. For each goal respondents were asked you to rank a first or second and in some cases third priority, depending on the options available. The results are summarised below relating to each goal.

#### Goal 1: Tackling climate change

<b>Goal issue</b>	<b>Priority</b>
Reducing damaging emissions by promoting less polluting forms of transport.	Top Priority
Make sure new developments like supermarkets, business parks and industrial areas are easily reached without using a car.	2nd Priority
Prepare and plan to minimise disruption caused by bad weather.	3rd Priority

#### Goal 2: Supporting economic growth

<b>Goal issue</b>	<b>Priority</b>
Improve road and public transport capacity to reduce congestion	Top Priority
Maintain and manage an efficient transport network to reduce disruption and delay.	2nd Priority
Provide support to new housing development to ensure that they are built with easy access To key services like Schools, shopping centres etc.	3rd Priority

#### Goal 3: Promoting equality of opportunity

<b>Goal issue</b>	<b>Priority</b>
Improve access to healthcare services generally, such as doctors, dentists and hospitals	Top Priority
Improve access from our rural communities to key services like schools, shops and healthcare	2nd Priority

#### Goal 4: Contributing to better safety, security and health

<b>Goal issue</b>	<b>Priority</b>
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Promote ways of getting about that are healthier for people, such as cycling and walking	Top Priority
Improve security and help people feel safer when using public transport	2nd Priority
Reduce air pollution caused by road vehicles	3rd Priority

Goal 5: Improving quality of life

Goal issue	Priority
Improve leisure opportunities by improving footpaths and cyclepaths, in the town and in the countryside	Top Priority
Protect the environment of Swindon and its surrounding communities	2nd Priority

6.10 Within the issues queried under 'climate change', the most important was reducing emissions through promoting less polluting forms of transport. In tackling economic growth, the most important issue noted by respondents to the survey was reducing congestion through improved road and public transport capacity, though almost as many people cited maintaining and managing an efficient transport network to reduce delay as the most important.

6.11 Although not a well supported goal overall, the key issue in equality of opportunity related to access to healthcare services. The most important issues within safety, security and health were reducing the number of people killed or injured on the roads and promoting walking and cycling in a safer environment. For quality of life, protecting the environment of Swindon and improving footpaths and cycleways were cited as the most important.

6.12 While maintaining the main roads and improving poorer quality roads are issues considered relating to maintenance of the road network that were well supported by respondents, maintaining pavements, pedestrian areas and cycleways were the most important issues.

Table 6.2: Possible transport measures that contribute to meeting local goals and priorities

<p><i>Community Strategy "Vision for Swindon" Themes (1-6)</i>  <i>"One Swindon" Themes 2011-2014 (A-D)</i>  <i>For full descriptions see Table 6.1</i></p>	<p>1 - A 'destination of choice' and sustainable growth.</p>	<p>2 - All are benefiting from our growing economy</p>	<p>3 - Safeguarded our environment for future generations</p>	<p>4 - A healthy, caring and supportive community.</p>	<p>5 - High aspirations are supported by superb education provision</p>	<p>6 - People have real influence and feel safe</p>	<p>A – Benefit from a growing economy and town centre</p>	<p>B – I like where I live</p>	<p>C – Sports, leisure and cultural opportunities</p>	<p>D – Living independently, protected from harm, etc</p>
Smarter Choices options (eg school, workplace, and individualised travel planning)	●	●	●		●	●	●	●		
Public transport improvements	●		●	●		●	●		●	●
Congestion reduction schemes involving traffic management	●	●	●				●	●		
Improving accessibility to and from employment and key services		●		●	●		●		●	●
Developing freight quality partnerships	●		●				●	●		
Development of workplace and school travel plans to reduce emissions from car journeys, improve air quality and promote health.	●		●	●	●	●		●		
Improvement of public transport services to reduce congestion	●	●	●				●	●		
Better integration of transport and spatial planning to reduce the need to travel	●	●	●	●	●	●	●	●	●	●
Improvements to highway maintenance			●					●		
Implementing road safety strategies including engineering based schemes and education, training and publicity, particularly for			●	●		●		●		●

vulnerable users.										
Implementation of walking and cycling schemes to promote healthier lifestyles and CO2 reduction.	•		•	•			•			•
Schemes to improve walking, cycling and public transport to improve access to key services			•	•	•		•	•	•	•
Noise management schemes through engineering and maintenance				•				•		
Improving rural accessibility and reducing the need for travel			•	•	•		•		•	•
Schemes to improve air quality through developing sustainable transport solutions	•		•	•				•		
Improvements to public transport services through partnership working with bus operators	•		•	•	•	•	•	•	•	•
Schemes to enhance the urban and rural streetscape		•	•				•	•		
Schemes to improve signing, travel information, ticketing and interchange facilities			•	•	•		•	•		•
Support the use of rail for the movement of people and freight	•		•				•	•		
Schemes to improve security on the public transport network						•		•		•
Demand responsive transport schemes for key groups			•	•					•	•

## Support Economic Growth

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

### Relevance to Swindon of Goal

6.13 In addition to the economic constraints posed by congestion, strategic transport planning has a key role in promoting local economic development. Internal and external connectivity is a key characteristic of a successful and competitive area. In national terms, as set out in the Eddington Transport study in 2006, the role of transport investment in sustaining the UK's productivity and competitiveness is crucial when looking forward to the challenges that lie ahead.

6.14 The Eddington Report describes seven ways in which transport impacts on the economy – 'the seven micro driver mechanisms'. Those of most relevance to Swindon are:

- increasing business efficiency, through time savings and improved reliability for business travellers, freight and logistics operations
- increasing business investment and innovation by supporting economies of scale or new ways of working
- supporting clusters and agglomeration of economic activity
- increasing the efficient functioning of labour markets, increasing labour market flexibility and the accessibility of jobs

6.15 Eddington goes on to make a series of recommendations on how to improve the UK economy. He states:

- "my first headline recommendation is therefore that, to meet the changing needs of the UK economy, the key strategic challenge is to improve the performance of the existing network
- my second headline recommendation is therefore that, over the next 20 years, the strategic economic priorities for transport policy should be congested and growing urban areas and their catchments, together with key inter-urban corridors and key international gateways that are showing signs of increasing congestion and unreliability"

6.16 Swindon has a key role in the regional economy, both now and in the future. Indeed, its importance will increase in the future as its New Growth Point status delivers significantly more housing and employment.

6.17 Swindon suffers from congestion at the current time, both within the town and particularly adjacent to the strategic routes such as the A419 and junctions 15 and 16 of the M4. This congestion is forecast to increase as the new development comes forward.

6.18 Swindon therefore meets the Eddington criteria. It is a centre of economic activity which is of regional importance, and is a focus for future growth in the region. However, its future success is being compromised by traffic congestion. Savings and improved reliability for car journey times within and adjacent to Swindon could deliver real benefits for the local and regional economy, thereby supporting national economic competitiveness and growth.

### **Alignment with other local strategies**

6.19 The Swindon Community Strategy “Shared Vision for Swindon 2008-2030” includes the following key themes that relate to this DaSTS Goal –

–

- Maximise the benefits to all Swindon people from a growing local economy, with a particular focus on technology, noting that investment in transport technology and the benefits that could be accrued from easier communications will need to be part of this.
- The safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling.
- A place where high aspirations are supported by superb education provision for all ages’, linking to the need for a skilled workforce and maximising benefits for all in a growing and high tech economy.

6.20 The “One Swindon” initiative includes the following key theme that relates to this DaSTS Goal –

- We can all benefit from a growing economy and a better town centre.

### **Challenges and opportunities**

6.21 The Swindon Economic Assessment<sup>28</sup> indicates that Swindon’s economy has a solid foundation and is a consistent performer. Along with this, the Swindon Economic Profile 2009<sup>29</sup> provides some key statistics. Swindon is ranked in the top 20% of districts nationally, based on the assessment of a number of economic indicators, including productivity (in which Swindon is some 40% above the national average) and Gross Value Added (GVA) per head. However, the assessment identifies that development in the town centre as an employment location has lagged behind growth in more peripheral areas, with the consequent effect of increasing transport demands in suburban areas (mostly through increasing car traffic).

6.22 The three biggest industry groupings in Swindon account for 82% of GVA and 65% of the workforce. These include business services, banking and finance (with approx 35% of GVA and 25% of workers), manufacturing

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<sup>28</sup> ‘Swindon Economic Assessment 2009’, Swindon Strategic Economic Partnership, June 2009

<sup>29</sup> ‘Swindon Economic Profile 2009’, Swindon Strategic Economic Partnership, 2009

(25% of GVA and 14% of the workforce) and distribution, transport and communications (23% of GVA and 26% of jobs). Within manufacturing, major companies operate in advanced engineering (including automotive), pharmaceuticals, information technology and electronics, and environmental technology. Research and development is also strong in the Swindon economy, related both to the high-tech manufacturing sector and the location of headquarters' functions of the UK's Research Councils.

6.23 Average earnings in Swindon were very similar to Great Britain averages in 2009 (approximately 1% higher). However, gross disposable household income has grown more slowly in Swindon since 2000 than the wider South West or the UK as a whole. Average earnings have also grown more slowly than Swindon earnings have historically done. These figures do not take fully into account the recent economic slowdown and recession, which are likely to have had a negative effect on earnings, though whether Swindon will have altered relative to the rest of the UK is less likely.

6.24 Swindon's economy has suffered in recent times, along with the rest of the UK, as a result of the global recession caused by crises in the banking system. In particular, exposure to some major industries has resulted in temporary and permanent lay-offs, many of which have been in the manufacturing and financial sectors. Overall, unemployment in Swindon rose from 2.2% in August 2008 to 5.2% at the same time in 2009 (as measured by the increase in Job Seekers Allowance claimants), going from well below the UK average to well above. This is against a general increase across the region and the UK.

### **Economic Strategy**

6.25 The 'Regional Economic Strategy for South West England 2006-2015' (RES) has a "shared vision for the development of the region's economy" within the wider context of sustainable development and complementing the Regional Spatial Strategy. There is a strong compatibility between the RES and DaSTS study objectives for Swindon, focusing in particular on the sustainable and inclusive connectivity of people, places and business. It cites the key potential for Swindon to play a far more significant economic role in the region.

6.26 The economic development model of the South West is expected to have to restructure against a background of low economic growth potential, from public sector, business and financial services towards new technologies in manufacturing, construction and business services, favouring a shift towards a lower carbon future.<sup>30</sup> This fits in well with Swindon's Community Strategy and other economic frameworks and strategies.

6.27 Swindon's 'Economic Vision and Framework' (2007) provides an overarching vision and structure for the economic development of Swindon up

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<sup>30</sup> South West Observatory's Business Economy Module Review Issue 18 (Fourth Quarter 2009)

to 2026. It identifies four key themes which are then developed into a future 'smart' growth strategy, which in turn informs an economic development framework. It is currently unclear how much that delivery of the Vision may be affected by economic conditions, but it remains the main basis for the economic development strategy for the town.

6.28 The 'smart' growth strategy consists of education and entrepreneurship, regenerating the town centre, seeking solutions to climate change and creating sustainable environments for communities and businesses. The proposed economic development has four elements: business creation and growth, regenerating and creating place, image and culture, and skills and labour market. Future growth sectors for the town are suggested as science and technology (in particular environmental technology), people care and cultural industries.

6.29 Sustainable transport is seen as a key part of the Vision, including strong linkages between key points in the town. The Vision includes aspirations for specific schemes, such as a 'fully integrated transport system' and guided buses from park and ride sites to the town centre. Keeping traffic flowing on core routes in and around the town (including the M4) is also seen as critical.

6.30 LAA Indicator 153, part of the economic development and enterprise block of Swindon's Local Area Agreement, is geared towards reducing 'worklessness', based on the proportion of working-age people claiming benefits in the worst performing neighbourhoods. This indicator supports the strategy for regeneration and renewal, and aims to unlock potential in the most deprived communities. There is a direct focus on the 'worst areas' and the link between accessibility and transport connectivity to employment opportunities. The 2008/09 baseline for the Indicator is 28.1%, with a 2010/11 target of 27.4%.

6.31 The Borough Council is currently working with a range of partners to develop a 'Single Plan' for Swindon. The process by which this is being undertaken is known as 'One Swindon', which is aiming to translate Swindon's 2030 Vision (from Swindon's Community Strategy) into a focus for delivery by the Borough Council and its partners over the next four years. It has six themes, with one being directly related to the economy – "More Swindon residents are benefiting from and contributing to Swindon's dynamic economy". Part of this is linked into raising the skills and attainment of Swindon's workforce, but part is related to transport. The current work indicates that Swindon's past success has been due in large part to its good transport and communications links but that further investment is needed if this competitive edge is to be maintained.

## **Regeneration**

6.32 Swindon's town centre has effectively failed to keep up with development of its suburbs and urban expansions. As such, the town centre arguably has somewhat limited retail options for a town of almost 200,000

inhabitants, and is therefore not considered the 'destination of choice' for Swindon residents or the wider immediate hinterland.

6.33 Anecdotally, Swindon residents are known to regularly travel to Bristol (both the city centre and Cribbs Causeway Mall), Bath, Cardiff, Cheltenham and Reading for shopping. As in other places in the UK, the comparative decline of the town/city centre has been exacerbated by the development of large supermarkets in suburban areas and 'out-of-town' retail parks, which between them have substantially removed grocery, furniture and electrical retailing from centres.

6.34 In the context of Swindon, while key elements of the urban extensions they are part of, two 'district centres' have also developed; at the West Swindon Centre and the Orbital Shopping Park (Northern Development Area). These are both significant shopping centres, which, although they do not provide the full range of retail opportunities, offer more than just day-to-day grocery, and furthermore also include community facilities such as libraries and, at West Swindon, the Link leisure centre. While a major attraction in its own right, the Great Western Outlet Mall, sited in part of the former railway works some 1km west of the towncentre, is also significant competition for trade, especially in clothing.

6.35 Regeneration of Swindon's town centre is a key aim of the economic strategies of the town, and the New Swindon Company has been constituted to specifically drive this forward. A series of ambitious regeneration schemes are being planned for Swindon town centre. Two major agreements were signed in 2008, for a total of almost £600 million, including:

- Union Square – a £350m mixed use development, involving an element of funding from the Housing and Communities Agency, comprising retail, office, leisure and residential uses; and
- Regent Place – a £215m mixed development including retail, residential and leisure facilities along with car parking.

6.36 However, re-development proposals in the town centre are currently uncertain. As a result of financial difficulties at developer Modus, primarily caused by the recession and financial crisis, the Regent Place proposals have been terminated, and will no longer be completed in their initially envisaged form.

## **Parking**

6.37 More recently the cost of town centre parking has been highlighted by town centre businesses (particularly retailers) as a cause of major concern in the face of the economic downturn and competition from other town centres or "out of town" locations.

6.38 As a result pricing of parking in Swindon has recently been used to promote the town centre as a destination for shopping on the run up to Christmas 2009. In a temporary initiative which ran until early January 2010,

reduced parking costs were offered in selected premium car parks for longer off-peak stays (£2-00 for a 4hr stay between 10:00am and 6:00pm). This initiative has been judged successful in attracting additional shoppers to the town centre and further promotional pricing was introduced in July 2010.<sup>31</sup>

## **Local Investment Plan**

6.39 The Local Investment Plan sets out Swindon's long-term investment needs to support its plans for growth, development and regeneration as set out in the LDF Core Strategy. Its aim is to bridge any funding shortfalls that are identified. It will be updated on a regular basis in light of changing circumstances and is developed with partner organisations and with community participation.

## **Traffic in Swindon**

6.40 The Swindon Transport Strategy considered traffic flows in Swindon in detail, including derivation of a Base Year (2006) and Future Year (2026) traffic models of the town, in the AM and PM peaks.

6.41 The Base Year model shows that the heaviest congestion during the AM peak occurs mainly on the western and eastern approaches into Swindon. In total there are six sections of the road network that experience this level of heavy congestion. The two main locations are accessing M4 Junction 16 and sections of the A420 within Swindon (west of the A419).

6.42 There are numerous other locations that are also congested, where traffic is regularly delayed on key corridors throughout the town. Indeed, many junctions suffer from some form of congestion-related delay in the AM peak. Key locations include:

- Dorcan Way,
- Marlborough Road B4006;
- Thamesdown Drive B4534; and
- Cricklade Road A4311 (which provides the main route to the town centre directly from the north)

6.43 During the PM peak, congestion is less wide-spread than in the AM peak and there are fewer congested locations. The Swindon Transport Strategy contends that this is as would be expected, as the AM peak is a more marked peak. The most heavily congested parts of the network in the PM peak are:

- Wootton Bassett Road A3102 (east of the railway line); and
- Junction of Hyde Road and Kingsdown Road (north east of the town centre).

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<sup>31</sup> 'Swindon News', Issue 82, December 2009, Swindon Borough Council

6.44 Other areas where PM peak congestion is notable include Mannington roundabout (and other junctions on Great Western Way), Cricklade Road, and Drakes Way/A420 corridor.

6.45 The Swindon Transport Strategy also contains a number of consultation responses relating to traffic congestion. It is particularly apposite to note that consultees generally suggest that the current situation is going to worsen. Some of the main specific issues identified included:

- While peak hour congestion is severe, particularly between 08:45 and 09:00, outside the peaks it is not such an issue.
- Traffic congestion affects certain centres and locations, but is unpredictable in the places it affects and the times at which it occurs.
- North-south movements are subject to worse traffic congestion (e.g. crossing Great Western Way) than the town centre.
- Congestion is felt to be exacerbated by various features of roads and traffic in the town, including: the 'school run', location of town centre car parks, signage in the town centre, lack of a ring road (east-west through traffic goes through the town), poor connectivity between North Swindon and the rest of the town, quantity and timing of traffic lights in the town centre and parked cars.
- Traffic congestion itself was felt to particularly impact upon: reliability and punctuality of buses and community transport services, residents' quality of life and health (due to pollution associated with heavy volumes of traffic and safety issues associated with rat-running) and local air quality and pollution levels.
- Congestion and poor accessibility may discourage businesses from locating in Swindon.
- Rat-running through residential areas was also recognised as an effect of congestion on main routes.

### **Strategic Highway Links**

6.46 Swindon is well-located on the motorway network, being immediately adjacent to the M4, with two junctions serving the town, one at its eastern edge (junction 15) and the other (junction 16) to the west. The A419 runs north-south, broadly along the eastern edge of the town, continuing north (as the A417 from Cirencester) to join the M5 near Gloucester (junction 11A).

6.47 The Highways Agency (HA) has a joint remit both to maintain the strategic functionality of the M4/A419 and to facilitate development. There is a need to ensure that the ambitious growth agenda within the Borough does not have a detrimental impact on the Strategic Road Network and there is concern that this fundamental challenge has not been formally recognised in any transport document produced by the Council.

6.48 The Highways Agency identifies that key junctions on the M4 and A417/A419 will need to be carefully managed, as development in the future has the potential to affect journey time reliability. One of the HA's Public Service Agreement (PSA) targets relates to journey time reliability, and the

target will be achieved if the average vehicle delay associated with the slowest 10% of daytime journeys on defined routes is lower than the base period (Aug'04-Jul'05). The defined routes include the M4 past Swindon and the A417/A419 from Swindon to Brockworth.

6.49 Sections of the A419 around Swindon (from White Hart Roundabout to the M4) record significant delay both overall (annual delay was over 100,000 vehicle hours per annum in 2006) and per vehicle (60-75 seconds). In addition, north of Swindon, significant delay is recorded on the A417 between Cirencester and the M5, in particular between Cowley and Brockworth, with average delays of over 75 seconds per vehicle in 2006. The M4 around Swindon does not regularly experience such delays.<sup>32</sup>

6.50 Within a given day, journey times on the A419 around Swindon can be 10%-25% above the minimum recorded in free-flow conditions (the morning peak is the worst period). Evening peak journeys are generally less likely to be delayed, with journey times 5%-10% above free-flow. Delays can be experienced in either northbound or southbound directions.

6.51 An alternative view of traffic conditions used by the HA is the concept of 'stress'.<sup>33</sup> In the South West, there were a number of sections of road with high stress levels. In general, these are small sections with particular locational features or issues. None are near Swindon, though the A417 between Little Witcombe and the A436 is included.

6.52 A number of specific issues have been identified on the A419 in connection with work to evaluate the impact of the Eastern Development Area (EDA) on the A419. While many relate to the effect that EDA traffic could have on the A419 and its associated junctions, they also identify some (primarily safety-related) issues with the road's current form. In general terms, these stem from the road's multi-purpose role as a strategic route and access to/from eastern Swindon.

6.53 For instance, junction separation is identified as an issue between Commonhead and M4 junction 15 and, allied to this, southbound queuing at Junction 15 is prevalent in the peaks, which also affects journey time reliability. Weaving between Commonhead and the Dorcan slip (northbound only) presents potential safety problems, as does peak time queuing from White Hart roundabout on the southbound off slip. The adequacy of visibility and slip suitability is also queried in a number of locations.

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<sup>32</sup> 'Regional Network Report for South West – 2008', Highways Agency

<sup>33</sup> Highway stress – simply expressed, this is the daily flow divided by the daily capacity. Flow is determined from counters and expressed as Annual Average Daily Flow (AADT). Daily capacity is based on the maximum sustainable flow in the peak hour, but lower values outside these times. As flows vary, it is therefore possible to achieve stress values above 100%. In general, roads that are congested for more than just the morning and evening peaks have stress levels over 100%. Where this occurs, the road is likely to be busy for substantial periods of the day.

6.54 The accident record of the A419 largely accords with these issues. Over the last five years, there were 101 injury accidents between Blunsdon and the M4 (November 2004 to October 2009). Of these, 91 were slight, with 9 serious and 1 involving a fatality. The accidents are located along the length of road, but with stronger clusters around the junctions, particularly those noted with specific issues.

6.55 The main themes in this area are –

*Maximising value for money from transport spending*

*Reduce lost productive time by maintaining or improving the reliability and predictability of journey times on key local routes for business, commuting and freight*

*Support the regeneration of Swindon Town Centre as outlined in the Central Area Action Plan*

*Deliver the transport improvements required to support the sustainable provision of housing*

*Ensuring that the transport network is resistant and adaptable to shocks and impacts such as economic shocks, adverse weather, accidents, terrorist attack and impacts of climate change*

A strategy has been established to address each of these themes.

### **Maximising value for money from transport spending**

6.56 Swindon faces major transport challenges in delivering economic growth. Transport infrastructure is expensive to provide and funding new infrastructure in the face of the economic downturn is a significant issue for Swindon. Transport can be an “enabler” or an “inhibitor” in achieving economic growth. If an appropriate transport infrastructure can not be provided due to costs then other wider aspirations (including economic growth) will fail.

6.57 Swindon therefore needs to obtain even greater value for money from the limited resources that will be available at least during the early years of the LTP3 period.

6.58 The use of the INTRASIM model as part of the DaSTS Study will ensure that different policy packages are compared to identify those that will deliver the greatest benefits across a range of strategic objectives.

6.59 For this theme our strategy is based on –

- Reducing the need to travel
- Making better use of existing transport infrastructure through promotion of the range of current travel choices.

- Selective improvements to the transport infrastructure especially where there are a wide range of benefits
- Using a scheme prioritisation methodology to identify the schemes that offer best value in delivering strategic objectives.

**Reduce lost productive time by maintaining or improving the reliability and predictability of journey times on key local routes for business, commuting and freight**

6.60 Congestion on the transport network poses constraints on the local and regional economy. It impacts on cars, buses and goods vehicles and results in lost productive time and increased costs for those travelling to and from work, for those travelling for business reasons and for those delivering goods and services to the community. Congestion is most often restricted to times of peak demand on the transport network which capacity is insufficient to meet demand. Accidents, incidents and road works also create problems on our road network making journeys unreliable and journey times unpredictable.

6.61 The Council, as Highway Authority has a network management duty under the Traffic Management Act 2004 to ensure the “expeditious movement of traffic on the network”.

6.62 For this theme our strategy is based on –

- Implementing the Network Management Plan for Swindon produced in accordance with the Traffic Management Act Network Management Duty.

**Support the regeneration of Swindon Town Centre as outlined in the Central Area Action Plan**

6.63 The Central Area Action Plan Supplementary Planning Document provides a detailed policy framework for delivering the regeneration of central Swindon. Development in central Swindon has failed to match the economic success of the rest of the Borough. As a result central Swindon fails to provide a real focus for the town. Central Swindon’s poor image, and the limited facilities that it offers threaten the future development of the town. Regeneration is essential to enable central Swindon to develop to the level expected of a town of Swindon’s status and to support the town’s role as a regionally important centre. With the focus of many transport corridors being the town centre the regeneration of the town centre economy offers the opportunity to improve connectivity between labour markets and employment locations most cost effectively than if employment locations are further dispersed in peripheral locations.

6.64 The Council’s vision for central Swindon is to create “an area that has life and energy throughout the day and into the evening. An attractive, safe, healthy and accessible place that people choose for leisure, living,

shopping and working. Where civic pride is strong and where prosperity drives the region's economy."

6.65 To deliver this vision the Central Area Action Plan provides a framework that will guide future development of central Swindon. One of the strategy elements that is considered fundamental to delivering the plan is that which covers "Transport and Movement".

6.66 The guiding principles for transport in central Swindon are to facilitate ease of movement into, out of and around the area and to support its economic growth and regeneration. The Council seeks to increase the choice of travel options so that the car does not dominate or have a detrimental impact on the environment, or the quality of the experience in the town centre. The strategy seeks to improve the capacity and performance of the existing road network by discouraging through traffic and reducing the amount of circulating traffic. Traffic management will ensure road systems operate efficiently to allow the road network cope with traffic movement.

6.67 Promoting the use of public transport together with enhancing provision for pedestrians and cyclists will be key to reducing the dominance of the car. A well located bus exchange will provide a new gateway for the town centre. Improving accessibility to the rail station will make the most of its gateway status.

6.68 Creating a balance between restraint and adequate parking provision within central Swindon will be important in the context of the role of parking in enhancing accessibility and supporting economic development in the area.

6.69 The bulk of funding for transport infrastructure will be from developer contributions, and through the direct provision of transport infrastructure within developments.

6.70 For this theme our strategy is based on the eight policies on Transport set out in the Central area action Plan -

- Development proposals and highway schemes will be assessed in terms of how they fit into the aims and objectives of the Local Transport Plan and the overarching transport and movement strategy of the Central Area Action Plan. Regard will be had to the individual and cumulative impact of such proposals on highway capacity and performance, traffic management, car parking, public transport and provision for cyclists and pedestrians, as well as environmental quality in the town centre.
- To assess the effect of development proposals on the highway and transport network in the immediate vicinity of the site, all developments that meet the thresholds set out in the Guidance for Transport Assessment should produce either a Transport statement, or Transport Assessment and Travel Plan as appropriate. This should include a

commitment to reduce adverse environmental impacts arising from increased traffic associated with the development.

- Major development proposals will be expected to provide signs or appropriate way-markers within their development indicating direction and distance to specific locations. Clear signing to car parks in the town centre should be provided to reduce circulating traffic.
- Developers will be expected to meet the transport infrastructure needs generated by their development proposals, be they on or off site, as well as contributing toward public transport services.
- The proposed location for the new bus exchange is to the western end of Fleming Way. This will be complemented by associated real time passenger information and up graded key supporting stops within the town centre. Two smaller bus interchanges will be safeguarded and enhanced at Regent Circus and Farnsby Street and will offer a choice of drop off and collection points for passengers. The bus exchange and bus interchanges must be incorporated into any master plans. New accessible taxi ranks should be developed at attractive and convenient locations around the town centre.
- A high quality, safe and continuous pedestrian network will be created through the town centre with clear linkages allowing access into the wider urban area. New developments should incorporate clearly signed continuous cycling routes linking to the urban cycle network and secure cycle parking at key locations in the town centre.
- The Council will support the development of a new 1,000 space car park to the north of the railway line as part of the Swindon Central development scheme. A new rail crossing linking the land north and south of the railway and/or improvements to the subway at the northern end of Bridge Street should be delivered prior to the completion of this car park. Strategic car parks are to provided within the new development schemes. Existing car parks located on key access roads into the central area will be modernised and refurbished.
- Major development schemes within the vicinity of the railway will be expected to make contributions towards improvements to existing crossings, which should be refurbished and made more accessible. The Swindon Central development scheme should help deliver a new crossing linking North Star with the land to the south of the railway.

### **Deliver the transport improvements required to support the sustainable provision of housing**

6.71 Swindon's historic economic success has been as a result of its continued expansion and growth. This growth is likely to continue in future years as Swindon seeks to maintain its economic status as a major regional centre. Continued growth in housing and jobs brings additional pressures on the transport network and the need for additional transport infrastructure.

6.72 In June 2008 the Council, with its strategic partners the HCA and SWRDA, commissioned WSP Consultants to prepare a Swindon Transport Strategy. The purpose was to provide a comprehensive understanding of the transport interventions required to facilitate and support sustainable growth in

Swindon, and in doing so, to inform the Core Strategy and LTP3. It included extensive investigation, consultation, modelling, option assessment and appraisal.

6.73 Three objectives were agreed with key stakeholders in order to guide development of the strategy –

- Deliver a vibrant local economy.
- Improve the sense of place.
- Reduce the need to travel.

6.74 A number of principles were also agreed to guide the development of the strategy –

- Encourage short distance trips by walking and cycling.
- Encourage journeys into the town centre.
- Encourage journeys around but within Swindon; and
- Provide good access to the strategic road network

6.75 From these objectives and principles a number of goals were identified –

- Reduce the need to travel.
- Provide a town centre that is attractive to shoppers.
- Improve pedestrian and cycle permeability.
- Provide flexible transport for all, enabling choice for travel demand.
- Improve choice and reduce dependence on use of the car.
- Capture trips that currently “leak” from the town.
- Improve connectivity of movements around Swindon.
- Encourage long distance journeys by rail.

6.76 The Strategy was approved by Cabinet in July 2009 and has informed the preparation of the emerging Swindon Core Strategy. The final strategy identifies an integrated package of transport measures to support the sustainable growth of Swindon and meet travel demand. The objectives of the strategy are to

- deliver a vibrant local economy
- Improve the sense of place and
- Reduce the need to travel

6.77 The objectives will be achieved by

- Supporting new investment in strategic public transport infrastructure
- Improving accessibility and social inclusion through providing sustainable linked communities, which have a range of services and facilities, and which are well connected to major employment, services and retail destinations with a particular focus on Swindon town centre

- Reducing the rate of growth of traffic congestion through promoting modal shift to sustainable transport methods, implementing effective travel choices and ensuring that development takes place in locations which are accessible by a range of transport modes
- Supporting the development of infrastructure for telecommunications and information technology and any other measures that may reduce the need to travel, while taking into account the impact on the environment and public health
- Improving the environment and quality of life through transport infrastructure and applying policies including those related to development densities, to ensure development can address the adverse impacts of traffic, giving priority to walking and cycling and public transport
- Promoting walking and cycling as a major mode of travel in Swindon and in support of community, health and sustainability objectives through improving the environment for pedestrians and cyclists, and providing priority on particular routes
- Improving road safety, by delivering appropriate infrastructure improvements within new developments

6.78 In summary the strategy aims to improve choice and thereby reduce reliance on the private car as a primary means of providing mobility. Public transport, cycling and walking are at the heart of the strategy but the interventions proposed for these modes are strongly supported by the provision of necessary infrastructure that is safe and secure.

6.79 The core of the proposals is the delivery of a rapid transit network serving the major developments on the urban fringe. It is intended that a number of high frequency transit corridors will provide direct access to the town centre and key facilities throughout Swindon. This will be supported by a new town centre bus exchange and a new orbital bus service providing for trips that do not need to travel through the town centre.

6.80 In addition there are improvements to the walking and cycling networks, a range of revised parking policies, use of Intelligent Transport Systems to improve traffic management and travel information availability. There will be a range of Smarter Choices measures to change travel behaviour and selective investment in highway infrastructure to relieve congestion at key points and improve road safety.

6.81 The interventions proposed in the Swindon Transport Strategy have been incorporated into the Local Transport Plan policies and programmes.

**Ensuring that the transport network is resistant and adaptable to shocks and impacts such as economic shocks, adverse weather, accidents, terrorist attack and impacts of climate change**

**Climate Change Adaptation**

6.82 For NI188 “Adapting to Climate Change” local authorities are to report their “preparedness” for dealing with the impacts of climate change in their areas. Preparedness is assessed on a scale set out below -

- Level 0 – Baseline, scoping, project planning, engagement of community, service users and LSP partners, developing vision
- Level 1 – comprehensive assessment, developed possible adaptation responses to transport policies and operations
- Level 2 – effective adaptation responses identified
- Level 3 – adaptation action plan developed
- Level 4 - adaptation action plan implemented, monitoring set up

All authorities are aiming to reach Level 4

6.83 Swindon is working its way through the levels of “preparedness” for adapting to climate change. Swindon has currently reached level 1 and aims to achieve Level 2 by May 2011.

A “risk and opportunity assessment” for transport infrastructure is set out in Table 6.3

Table 6.3 Transport Infrastructure - risks and opportunities

<b>Risk</b>	<b>Impact</b>
<b>Increasingly frequent and more severe weather</b>	Damage and disruption to strategic transport infrastructure
Storms and gales	Especially rail services, key strategic roads and telecommunication systems
Heatwaves	Especially rail services(buckling rails), roads (melting surfaces), bridges and other structures (thermal expansion)
Flooding	Especially near rivers and areas with restricted capacity of highway drainage. Scouring of bridge footings.
<b>Seasonal change</b>	
Changing ground conditions	Increase risk of subsidence with potential impact on road and rail infrastructure eg broken water mains, damage to earthworks, damage to structures
Milder weather conditions	Increased attractiveness of walking and cycling, increase in travel for leisure purposes
Warmer summers	Increase in use of transport infrastructure due to increased leisure travel
Wetter summers	Less walking and cycling and more car use. More corrosion to electrical infrastructure eg street lights
Milder winters	Reduction in frost damage to network. Reduction in winter weather disruption. Less spending on gritting.
Wetter winters	Increased level of flood damage and disruption to transport network

6.84 Our climate change adaptation strategy is to identify areas at risk of disruption and put measures in place to increase the transport networks resilience to extreme weather events.

6.85 Much work remains to be done on gaining a full understanding of the existing vulnerability of the transport infrastructure to changes in climate. A programme of measures to manage and reduce this vulnerability can then be agreed.

### **Network Management**

6.86 The Traffic Management Act places a duty on local authorities to set out its policies and put procedures in place for dealing with disruption on the highway network caused by extreme events. The intention is reduce the impact of such events on the operation of the network and thereby limit the wider impact on the community. This includes reducing the economic impact on local business and residents.

6.87 For this theme our strategy is based on –

- For climate change adaptation –work towards a Level 4 stage of preparedness by identifying areas at risk of disruption and putting measures in place to increase the transport networks resilience to extreme weather events
- Implementing the Network Management Plan strategy to deal with extreme events and disruptions to the highway network

6.88 The following targets contribute to supporting economic growth.

Average journey time per mile in the morning peak

Principal roads where maintenance should be considered

Non principal roads where maintenance should be considered

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

Bus journeys – increase in number of bus passengers

Bus services running on time

### **Cross reference to other policies and strategies**

Central Area Action plan – Supplementary Planning Document

Swindon Transport Strategy (WSP 2009)

Transport Asset Management Plan

Highway Network Management Plan

LTP3 Supplementary Document – Network Management

## Climate Change

**DaSTS Goal – To reduce transport’s emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change.**

6.89 The main theme in this area is to –

*Deliver quantified reductions in greenhouse gas emissions consistent with the Climate Change Act and EU targets, taking into account national policy measures.*

### Relevance to Swindon of Goal

6.90 Despite Swindon’s existing levels of transport-related CO<sub>2</sub> emissions being in line with the regional and national averages, they are forecast to increase significantly in the future. This is due mainly to the levels of new housing and employment planned for the town.

6.91 Looking to the future, Swindon needs to play its part in reducing levels of CO<sub>2</sub> and other greenhouse gases. This requires the identification of new transport measures and interventions which, whilst facilitating the improved economic performance described above, will do so in a sustainable manner. This is a key challenge for the Local Transport Plan.

### Alignment with other local strategies

6.92 The Swindon Community Strategy “Shared Vision for Swindon 2008-2030” includes the following key themes that relate to this DaSTS Goal –

- Swindon as ‘destination of choice’ and has the objective of making Swindon a national icon for growth on a sustainable basis.
- The safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling.

6.93 The “One Swindon” initiative includes the following key theme that relates to this DaSTS Goal –

- We can all benefit from a growing economy and a better town centre.
- I like where I live.

### Challenges and opportunities

6.94 The Climate Change Act 2008 established legally binding national targets for CO<sub>2</sub> emissions to 2020 and 2050. It made a commitment to setting five year carbon budgets starting 2008-2012, as set out in the 2009 budget statement. The national targets are –

- 34% reduction in CO2 emissions by 2020
- 80% reduction in greenhouse gases by 2050

6.95 However, national road transport emission levels in the UK in 2007 were 11% over the 1990 baseline level; hence these targets are effectively increased to 40% and 82% respectively (based on Defra figures).

6.96 Transport accounts for 21% of national greenhouse emissions. Of this, domestic road transport is by far the biggest emitter at around 92%. The contribution of the transport sector towards meeting the national targets are set out in “Low Carbon Transport: A Greener Future” (Department for Transport, July 2009). Decarbonising transport is seen as a key part of the solution to mitigating climate change. The Government’s Carbon Reduction Strategy states “...by 2050 we can expect to see a fundamentally different transport system in our country. Road and rail transport will be largely decarbonised”.

6.97 The decarbonising of transport cannot be viewed in isolation. It has to be seen as part of the overall objectives of our travel and transport system and as part of Swindon’s wider agenda to reduce carbon emissions.

6.98 The national strategy places reliance on

- New vehicle technologies and fuels
- Using market mechanisms such as taxes and duty; and
- Promoting low carbon choices

6.99 The Department for Transport anticipates the first two making a significant contribution towards meeting the national 2020 carbon reduction target but looks to local authorities to develop strategies and implementation plans that take significant steps towards mitigating climate change.

6.100 Indicator 186 is part of the environmental sustainability block of Swindon’s Local Area Agreement, and measures per capita CO2 emissions. The Indicator uses centrally produced statistics to measure end user CO2 emissions in local areas from business and the public sector, domestic housing and road transport. This indicator is particularly useful in understanding the baseline situation, such as the contribution of transport to overall CO2 emissions in Swindon, and how the town compares to the wider South West region and the UK as a whole. Table 6.4 illustrates:

Table 6.4: CO<sub>2</sub> emissions per capita (kt) – from Indicator 186

	Total (kt)			Road Transport					
	2005	2006	2007	2005		2006		2007	
Swindon	8.7	8.7	8.4	1.8	20%	1.7	20%	1.7	20%
South West	7.2	7.1	6.9	1.9	26%	1.8	26%	1.8	26%
United Kingdom	7.3	7.2	7.0	1.8	24%	1.7	24%	1.7	25%

Source: calculated from data provided by Department of Energy and Climate Change (DECC)

6.101 Consistent information is only available for the period as recently as 2007 (released in November 2009). This suggests that Swindon’s CO<sub>2</sub> emissions per

capita are relatively high compared to the South West and the UK, though this is likely to be caused by a higher than average industrial usage. On the other hand, road transport emissions are similar to national figures, and lower than the South West as a whole. It is responsible for a relatively low 20% of Swindon's total emissions (again as a result of industrial emissions being prevalent in Swindon).

6.102 It is worth noting that CO<sub>2</sub> emissions per capita from road transport reduced in Swindon, the South West region and the UK between 2005 and 2007. This is in line with a reducing trend for total CO<sub>2</sub> emissions at all levels.

Table 6.5 CO<sub>2</sub> emissions by sector 2007 for Swindon

Domestic	28.7%
Road Transport (not including motorways)	20.2%
Industry and Commerce	51.1%

6.103 The Department for Transport's Carbon Pathways report sets out the scale of the challenge between forecast emissions from transport and any implied or hard targets for transport. The forecasts suggest that domestic transport emissions will fall by 1% by 2020 from 2005 levels, with a further 5% reduction possible from a UK proposal for a revised EU wide cap on new car CO<sub>2</sub> emissions.

6.104 Road Transport accounts for 92% of emissions from domestic transport in the UK (excludes international aviation and shipping). Within road transport 52.5% of emissions come from passenger cars. 19.8% from heavy goods vehicles, 15% from light goods vehicles and 4.5% is from other road transport such as buses.

6.105 The table 6.5 shows the local authority CO<sub>2</sub> emissions estimates by industry and commerce, domestic and road transport, issued by Defra for 2007.

Table 6.6 Local Authority CO<sub>2</sub> emission estimates

Local Authority Area	Year	Industry and Commerce	Domestic	Road Transport	Total	Population ('000s, mid-year estimate)	Per Capita Emissions (t)	% fall since 2005	Transport Emissions per capita (t)	Transport Emissions as % of total
Bath and North East Somerset	2005	389	429	259	1,077	174.9	6.2		1.5	24.0
	2006	360	429	255	1,044	175.6	6.0		1.5	24.4
	2007	345	413	256	1,015	178.3	5.7	7.6	1.4	25.3
Bournemouth	2005	315	409	192	916	161.0	5.7		1.2	20.9
	2006	322	405	189	915	161.2	5.7		1.2	20.6
	2007	308	388	189	885	163.2	5.4	4.7	1.2	21.4
Bristol, City of	2005	980	879	463	2,323	405.6	5.7		1.1	20.0
	2006	963	881	454	2,298	410.5	5.6		1.1	19.8
	2007	900	846	462	2,208	416.4	5.3	7.5	1.1	20.9
Cornwall	2005	1,439	1,289	1,082	3,810	519.5	7.3		2.1	28.4
	2006	1,424	1,314	1,061	3,798	524.2	7.2		2.0	27.9
	2007	1,369	1,259	1,069	3,696	529.5	7.0	4.8	2.0	28.9
Devon	2005	2,128	1,843	1,676	5,647	732.7	7.7		2.3	29.7
	2006	1,929	1,863	1,651	5,443	740.8	7.3		2.2	30.3
	2007	1,847	1,779	1,645	5,271	750.1	7.0	8.8	2.2	31.2
Dorset	2005	940	1,079	898	2,916	401.0	7.3		2.2	30.8
	2006	919	1,090	884	2,893	403.0	7.2		2.2	30.5
	2007	888	1,031	887	2,806	406.8	6.9	5.2	2.2	31.6
Gloucestershire	2005	1,768	1,486	1,054	4,307	575.7	7.5		1.8	24.5
	2006	1,815	1,508	1,030	4,352	578.7	7.5		1.8	23.7
	2007	1,744	1,463	1,030	4,236	582.5	7.3	2.8	1.8	24.3
Isles of Scilly	2005	7	6	1	14	2.1	6.5		0.3	3.9
	2006	6	6	1	13	2.1	6.1		0.3	4.2
	2007	7	6	1	13	2.1	6.3	3.2	0.3	4.0
North Somerset	2005	458	492	294	1,243	198.6	6.3		1.5	23.7
	2006	468	500	286	1,255	201.4	6.2		1.4	22.8
	2007	451	480	289	1,220	204.7	6.0	4.8	1.4	23.7
Plymouth	2005	609	525	344	1,479	246.0	6.0		1.4	23.3
	2006	618	525	338	1,481	248.1	6.0		1.4	22.8
	2007	618	499	342	1,459	250.7	5.8	3.2	1.4	23.4
Poole	2005	427	348	197	971	136.7	7.1		1.4	20.2
	2006	428	349	191	968	136.9	7.1		1.4	19.7
	2007	427	332	191	950	138.1	6.9	3.1	1.4	20.
Somerset	2005	1,628	1,319	1,103	4,050	515.9	7.9		2.1	27.2
	2006	1,600	1,339	1,073	4,012	518.7	7.7		2.1	26.7
	2007	1,571	1,281	1,080	3,932	522.7	7.5	4.2	2.1	27.5
South Gloucestershire	2005	1,037	566	417	2,020	253.1	8.0		1.6	20.6
	2006	995	574	408	1,977	254.4	7.8		1.6	20.7
	2007	1,016	554	415	1,984	256.5	7.7	3.0	1.6	20.9
Swindon	2005	830	456	324	1,610	184.5	8.7		1.8	20.1
	2006	836	464	318	1,618	186.6	8.7		1.7	19.6
	2007	812	455	321	1,588	189.5	8.4	4.0	1.7	20.2
Torbay	2005	250	307	155	713	132.9	5.4		1.2	21.8
	2006	238	303	154	695	133.2	5.2		1.2	22.1
	2007	220	292	155	667	134.2	5.0	7.3	1.2	23.2

Local Authority Area	Year	Industry and Commerce	Domestic	Road Transport	Total	Population ('000s, mid-year estimate)	Per Capita Emissions (t)	% fall since 2005	Transport Emissions per capita (t)	Transport Emissions as % of total
Wiltshire	2005	1,432	1,193	1,022	3,647	446.9	8.2		2.3	28.0
	2006	1,419	1,209	1,007	3,636	448.7	8.1		2.2	27.7
	2007	1,403	1,163	1,018	3,584	452.5	7.9	2.9	2.2	28.4
South West Total	2005	14,636	12,626	9,481	36,742	5087.1	7.2		1.9	25.8
	2006	14,342	12,759	9,299	36,400	5124.1	7.1		1.8	25.5
	2007	13,927	12,238	9,349	35,514	5177.8	6.9	5.0	1.8	26.3
UK Total	2005	189,294	149,568	105,826	444,688	60238.4	7.4		1.8	23.8
	2006	188,138	150,782	103,967	442,888	60587.3	7.3		1.7	23.5
	2007	182,254	145,725	104,748	432,727	60975.4	7.1	3.9	1.7	24.2

Defra – Local Authority CO2 emissions estimates 2005-8 (as published November 2009)

6.106 The table 6.6 above shows the per capita emissions by local authority in the South West. This includes emissions from industry and commerce and domestic households as well as transport. In 2007, with the exception of the Isles of Scilly, transport accounts for between 20% and 31.6% of total estimated emissions in local authority areas. The highest proportions are in the rural counties of Devon, Cornwall, Dorset and Wiltshire. The lowest proportions are in the urban areas such as Poole, Bristol and Swindon. The large rural counties have some of the highest per capita emissions and have per capita transport emissions in excess of two tonnes per annum. This demonstrates that rural areas with dispersed populations over a large area exhibit both the highest per capita transport emissions and have relatively large transport emissions compared with other sources.

6.107 The Department for Transport Carbon Pathways Analysis considered potential cost-effective ways to reduce emissions for different types of journey and different journey modes. Although reducing all vehicle trips and overall distance travelled is important, the analysis shows that:

- The relative concentration of transport emissions is on major routes and in large urban conurbations as against rural locations;
- Table 6.7 shows that although short car driver trips (less than 5 miles) account for a large proportion of trips by household car (57%) they produce a smaller share of CO2 emissions – 19%. Longer trips account for a smaller share of total trips made but produce a higher proportion of emissions (eg 7% of trips are over 25 miles but account for 38% of CO2 emissions from cars).
- Certain journey purposes are associated with a greater proportion of CO2 emissions than the proportion of passenger distance travelled – commuting trips account for 19% of passenger distance travelled but 25% of CO2 emissions from household cars. Business trips account for 10% of total car mileage but 12% of total emissions. This is because trip lengths, journey speeds, type of vehicle and vehicle occupancy rate are also taken into account (Table 6.8);
- CO2 emissions from freight movements are also dominated by the road sector. Nationally light goods vehicle traffic is forecast to increase most rapidly, with expected growth of 67% by 2025, partly due to the trend in home deliveries.

Table 6.7 CO2 emissions by car trips and distance travelled - Great Britain

Journey Distance	% of total car trips	% of total distance travelled by car	% of CO2 emissions
Under 1 mile	7	1	1
1-2 miles	17	2	4
2-5 miles	33	12	14
5-10 miles	21	16	18
10-25 miles	16	26	25
25-50 miles	4	16	15
50-100 miles	2	13	11
100 miles +	1	14	12

Table 6.8 Passenger distance and CO2 emissions from household cars - by Journey Purpose Great Britain 2006

Journey Purpose	% of total passenger distance by household cars	% Estimated CO2 emissions from household car journeys
Commuting	19	25
Business	10	12
Education	3	3
Shopping	14	14
Other personal business	18	16
Visit friends at home	16	13
Visit friends elsewhere	4	3
Holiday/day trip	10	7
Other leisure	6	6

6.108 There are two indicators relating to carbon reduction.

CO2 reduction from local authority operations

- Baseline 2008/9
- Data provided by local authority using Defra spreadsheet tool
- In July 2009 Defra reported an error in the spreadsheet template – therefore local authority data is not yet available

Per Capita reductions in CO2 emissions in the local authority area.

- Baseline 2005
- Data published by Defra for each local authority broken down into data for
  - Business and public Sector
  - Domestic Housing
  - Road transport but excluding motorways
- Data for 2007 was published in September 2009
- Road transport emissions are calculated using Department for Transport area wide vehicle kilometre data and applying national average vehicle fleet composition information.

6.109 A carbon reduction target to be adopted by and met through the delivery of LTP3 is under consideration. The DaSTS study INTRASIM decision tool will provide a rigorous appraisal of the CO2 impact of policy package options being considered for inclusion in LTP3.

6.110 Our carbon reduction strategy for LTP3 is likely to be largely based around influencing travel behaviour by the promotion of low carbon alternatives to car travel. Measures can include

- Workplace Travel Plans
- Residential Travel Plans
- School Travel Plans
- Personalised Travel Planning
- Increase promotional activities and easier access to travel information
- Improvements to cycling infrastructure
- Improvements to walking infrastructure
- Improvements to public transport
- Improved integration of travel modes
- Reducing the need to travel through land use planning and use of technology

6.111 Recognising the important of car manufacturing to the local economy the strategy also includes local initiatives around new vehicle technologies and fuels.

### **Climate Change Adaptation**

6.112 There is one further indicator related to climate change.

#### Adapting to Climate Change

6.113 Local authorities are to report their “preparedness” taking account of national guidance. To report on the level reached as follows

- Level 0 – Baseline, scoping, project planning, engagement of community, service users and LSP partners, developing vision
- Level 1 – comprehensive assessment, developed possible adaptation responses to transport policies and operations
- Level 2 – effective adaptation responses identified
- Level 3 – adaptation action plan developed
- Level 4 - adaptation action plan implemented, monitoring set up

All authorities are aiming to reach Level 4

6.114 Swindon is working its way through the levels of “preparedness” for adapting to climate change. Swindon has currently reached level 1 and aims to achieve Level 2 by May 2011.

6.115 A “risk and opportunity assessment” for transport infrastructure is set out in Table 6.9.

Table 6.9 Transport Infrastructure - risks and opportunities

<b>Risk</b>	<b>Impact</b>
<b>Increasingly frequent and more severe weather</b>	Damage and disruption to strategic transport infrastructure
Storms and gales	Especially rail services, key strategic roads and telecommunication systems
Heatwaves	Especially rail services(buckling rails), roads (melting surfaces), bridges and other structures (thermal expansion)
Flooding	Especially near rivers and areas with restricted capacity of highway drainage. Scouring of bridge footings.
<b>Seasonal change</b>	
Changing ground conditions	Increase risk of subsidence with potential impact on road and rail infrastructure eg broken water mains, damage to earthworks, damage to structures
Milder weather conditions	Increased attractiveness of walking and cycling, increase in travel for leisure purposes
Warmer summers	Increase in use of transport infrastructure due to increased leisure travel
Wetter summers	Less walking and cycling and more car use. More corrosion to electrical infrastructure eg street lights
Milder winters	Reduction in frost damage to network. Reduction in winter weather disruption. Less spending on gritting.
Wetter winters	Increased level of flood damage and disruption to transport network

6.116 Our climate change adaptation strategy is to identify areas at risk of disruption and put measures in place to increase the transport networks resilience to extreme weather events.

6.117 Much work remains to be done on gaining a full understanding of the existing vulnerability of the transport infrastructure to changes in climate. A programme of measures to manage and reduce this vulnerability can then be agreed.

### **Cross reference to other policies and strategies**

LTP3 Supplementary Document - Smarter Choices

Sustainable Modes of Travel to School Strategy 2010

Transport Asset Management Plan

## **Safety, Security and Health**

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

6.118 The main themes in this area are –

*Reduce the risk of death or injury due to transport accidents.*

*Reduce crime, fear or crime and anti social behaviour on the transport network.*

*Maintain air quality standards.*

*Promoting good health through active travel.*

### **Summary of local relevance of Goal**

6.119 As an everyday activity for almost everyone in the community, transport has a direct or indirect impact on most people's day to day safety, security and health. The Local Transport Plan seeks to reduce the negative impacts and increase the positive impacts of transport in these areas.

6.120 Progress towards the national road safety targets in Swindon is mixed, with targets exceeded for reductions in the number of children killed or seriously injured and people slightly injured, whereas targets are not being met reducing the overall number of people killed or seriously injured. More attention needs to be paid to this area.

6.121 Walk and cycle journeys are the most beneficial to health. Whilst significant numbers of Swindon residents walk or cycle within the town, including making journeys to work, there are a number of disincentives in evidence.

6.122 Some of these are physical. The rail line in particular creates a barrier between the north of Swindon and the town centre. Some of the major roads and junctions are not conducive to walking or cycling, and many of the more recent residential areas often do not have the permeability which encourages walking and cycling journeys.

6.123 There is a real potential for the Local Transport Plan to assist in increasing the attractiveness of walking and cycling. Not only will this help to address health issues, but it would also be a vital contributor to the climate change challenge described above. Within this, approaches need to consider that pedestrians and cyclists tend to perceive vehicular traffic as a threat to safety.

## **Alignment with other local strategies**

6.124 The Swindon Community Strategy “Shared Vision for Swindon 2008-2030” includes the following key themes that relate to this DaSTS Goal

–

- The safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling.
- A healthy, caring and supportive community that recognises provision of services and facilities, and accessibility to them.
- A place where local people can have real influence and where they feel safe (in particular in relation to reducing road accidents)

6.125 The “One Swindon” initiative includes the following key themes that relate to this DaSTS Goal –

- I like where I live.
- Everyone is enjoying sports, leisure and cultural opportunities.
- Living independently, protected from harm, leading healthy lives and making a positive contribution.

6.126 A strategy has been established to address each of the themes in this area.

### **Reduce the risk of death or injury due to transport accidents.**

6.127 Road safety in Swindon has been improving since the mid nineties. In Swindon and Wiltshire in 2006 the number of people killed was 11% below the 1994-98 baseline, with the number of children killed 35% lower and a reduction of over 50% in the number of pedal cyclists killed or seriously injured even with traffic rising by an estimated 15% per cent in this period. Between 2004 and 2009, 23 people were killed on the roads in Swindon and 3069 were injured, with accidents at junctions accounting for 40% of the number of people killed or seriously injured. Accident figures for 2008 show an overall improving trend since 2007; a 9% reduction in terms of collisions and a 7% reduction in terms of casualties.

6.128 For this theme our strategy is based on our Strategic Plan for Accident Reduction (SPAR) as outlined in the LTP Supplementary document on Road Safety.

6.129 We have identified the following strategic priorities to help us achieve our vision and meet our road safety targets:

- Work smarter with our partners in the Wiltshire and Swindon Road Safety Partnership to deliver effective solutions to road safety issues.
- Maximise the benefit that emerging technology can bring to the measures we introduce.

- Deliver well chosen education and enforcement measures that help support responsible driving whilst cracking down on irresponsible and dangerous driver behaviour.
- Continue to develop educational programmes that assist the development of the practical skills people need when using our roads.
- Where our experience and accident statistics show it will be beneficial, we will improve the road network.

#### 6.130 Priority Themes

Our SPAR actions are grouped into the following thematic priority areas -

- Safer for children
- Safer drivers – training and testing
- Safer drivers – drink, drugs and drowsiness
- Safer infrastructure
- Safer speeds
- Safer vehicles
- Safer motorcycling
- Safer pedestrians, cyclists and horse riders
- Better enforcement
- Promoting safer road use

6.131 In January 2011 the Government announced that it would be publishing a new strategic framework for road safety in spring 2011. As a result it is likely that the Council will need to carry out a review and refresh of its own road safety strategy and will update the content of LTP3 as appropriate.

#### **Reduce crime, fear or crime and anti social behaviour on the transport network.**

6.132 Wiltshire and Swindon have some of the lowest rates of recorded crime in England and Wales, but there is still widespread concern over safety in the Borough. There is evidence, however, that this perception is improving. In 2008 88% of residents felt safe in the day in their local area, with 47% feeling safe at night. This was an increase from 85% and 35% respectively in 2006.

6.133 Fear of crime can be a significant factor in some sections of the community in discouraging or limiting mobility. These fears can be particularly strong after dark and for those travelling alone. Concerns can be listed as

- Insecurity while waiting at bus stops and (to a lesser extent) while travelling by bus (particularly at night). The bus station is often identified as a major concern because of anti social behaviour.
- Insecurity in using car parks – particularly multi storey car parks and at quieter times
- Insecurity in waiting at taxi ranks particularly late at night

- Insecurity in using walking and cycling networks particularly in isolated locations and in using subways.
- Concern at leaving cycles, powered two wheelers and cars in parking areas in case of theft or damage.

6.134 The multi agency Community Safety Partnership leads on the preparation of a crime reduction strategy for the Swindon area. The Local Transport Plan can contribute to tackling crime, fear of crime and anti social behaviour issues through measures such as improved lighting, CCTV monitoring and through infrastructure design that seeks to reduce the opportunities for crime at the planning stage.

6.135 For this theme our strategy is based on –

- Recognition of the impact of crime, fear of crime and disorder on achieving the wider aims of the Local Transport Plan and the need to take this fully into account in the design and operation of transport infrastructure.
- Targeted interventions to tackle crime and anti social behaviour through schemes such as improved street lighting and CCTV provision.
- Use of best practice design principles in new infrastructure to “design out” crime.
- Progress plans for a new, high quality public transport interchange as part of town centre regeneration to replace the existing bus station.

### **Maintain air quality standards.**

6.136 Transport is a major source of air pollutants which can have a detrimental impact on the air quality of an area, in turn leading to negative effects on human health. Exposure to poor air quality seriously affects the most vulnerable such as the very young, very old and people with cardio-respiratory problems. A key traffic pollutant is Nitrogen Dioxide (NO<sub>2</sub>) which is produced both from vehicle tailpipes and from Nitrogen Oxide (NO<sub>x</sub>) emissions from vehicles that react in the air and turn into NO<sub>2</sub>.

6.137 Air quality in the Borough of Swindon is generally good with no Air Quality Management Areas (AQMAs) recorded, however the increase in housing development and transport infrastructure which has been proposed in the Swindon LDF may lead to future problems.

6.138 Air Quality is monitored by local authorities to ensure that the standard of air does not reach a level which could be detrimental to human health or biodiversity. Local Air Quality Monitoring Reports are produced by Swindon Borough Council and set out the annual mean values of seven pollutants (Benzene, 1,3-Butadiene, Carbon Monoxide, Lead, NO<sub>2</sub>, Particulate Matter and Sulphur Dioxide) from 23 sites around the Borough. The 2006 report indicated that only NO<sub>2</sub> exceeded the objective levels. Analysis of roadside NO<sub>2</sub> concentrations showed that the contribution of road transport to the NO<sub>2</sub> emissions in the urban areas of the Borough was generally above the national average.

6.139 The 2009 report measured the seven pollutants at 26 sites: NO<sub>2</sub> concentrations were found to be exceeding the objective level at seven sites with only two sites close to reaching the objective. All other pollutants were not exceeding their objectives. Twelve of the sites were found to have had a significant increase in NO<sub>2</sub> concentration since the 2006 report and had been assessed as sites of concern.

6.140 The report also found that the number of diesel trains passing through Swindon station (approx 189 per day) could be of potential concern due to the NO<sub>2</sub> emissions produced. However the figure is below the 300 per day mark set out in the DEFRA Local Air Quality Management Technical Guidance which would lead to monitoring of the site. It was also found that no specific road transport sources were of pollutant concern in the Borough.

6.141 Based on current national projections NO<sub>2</sub> is forecast to decrease, in part due to advances in vehicle technology. On the other hand there has been an increase in the number of diesel vehicles that emit higher proportions of NO<sub>2</sub> directly from the tailpipe, leading to higher roadside concentrations.

6.142 Specific air quality issues in Swindon can be summarised as –

- Effect of pollution from busy roads on adjacent houses
- Emissions of NO<sub>2</sub>, PM<sub>10</sub> and other pollutants
- Development leading to increased road traffic and pollution

6.143 For this theme our strategy is based on –

- Raising awareness of air quality issues particularly in relation to new developments
- Continued assessment of air quality
- Reducing vehicle use by promoting public transport, walking, cycling and car sharing
- Encouraging use of lower emission vehicles
- Better management of the highway network to reduce congestion, smooth the traffic flow and direct traffic on to the most appropriate roads

### **Promoting good health through active travel.**

6.144 In Swindon only 22.5% of adults are achieving the level of physical activity required to impact positively on their health. Across the Borough there are variations in the levels of health and in the factors determining health. In general people are less health deprived than those in England as a whole, but health concerns are more prevalent in the most deprived parts of the Borough. This is indicated in the 2001 Census which showed an average of 61.74% of people in the most deprived areas describing their health as “good” compared to 78.26% in the least deprived areas. 11.5% of people in the most deprived areas described their general health as “Not Good” compared with just 5.2% in the least deprived areas. The life expectancy of the population of

Swindon is, however, lower than the regional average at 77.7 years for men and 82.1 years for women compared to 79.0 and 83.1 respectively in the South West.

6.145 Physically active lifestyles are important to health. Reliance on car use can lead to inactive/sedentary lifestyles and contribute to higher levels of heart disease, stroke, cancers, diabetes and other illnesses including those resulting from obesity. Active travel such as walking and cycling is a good way to improve health as it builds exercise into everyday activities.

6.146 At school age, active travel is a main contribution to one hour per day of physical activity and controlling body weight against weight gain. Increased public transport use results in increased physical activity. Each additional kilometre walked per day is associated with a 4.8% reduction in the likelihood of obesity. Each additional hour spent in a car per day is associated with a 6% increase.

6.147 Measures which promote active travel match those that contribute to a wide range of other transport issues including congestion reduction, improving air quality reducing road casualties and increasing accessibility.

6.148 Measures to promote walking and cycling to school through school travel Plans have close links to the Healthy Schools agenda and current concerns to tackle childhood obesity.

6.149 Active travel contributes to wider targets and indicators around obesity, public health and increase physical activity generally. As a result there is increased partnership working between health and transport professionals in recognition of the shared agenda that exists in this area.

6.150 The Active Swindon Strategy (2009-2015) is a multi agency approach that aims to increase levels of physical activity, reduce obesity and improve the lives of people living in Swindon. The aim is to increase the number of people achieving the recommended level of physical activity necessary for a healthy lifestyle, by a minimum of 1% year on year. The strategy comprise four themes –

- Increase the physical activity levels in adults and young people
- Create an environment that promotes physical activity as part of everyday life
- Empower people to be more physically active
- Increase the capacity to deliver physical activity and sport

6.151 The Local Transport Plan works together with the Active Swindon Strategy on the delivery of shared goals and objectives and there is close working between the health, leisure and Smarter Choices sectors.

6.152 The return of public health to top tier local government by 2013 offers an important opportunity to ensure we promote public health more effectively through a more integrated service and deliver transport services

which enable access needs to be met and which promote health for individuals and society as a whole.

This topic is related to Chapter 6e on the DaSTS Goal “Improve Quality of Life”.

6.153 For this theme our strategy is based on –

- Increasing levels of physical activity through more walking and cycling in line with the national Active Travel Strategy (DfT/Dept of Health Feb 2010) and the Active Swindon Strategy (2009-2015)
- Working with health sector partners on cross sector promotion of active travel initiatives.
- Improvements to the cycling and walking infrastructure
- Work on School Travel Plans and Workplace Travel Plans to promote the health benefits of alternatives to car travel.

6.154 The following targets contribute to better safety, security and health.

People killed or seriously injured in road traffic accidents  
Children killed or seriously injured in road traffic accidents  
Number of slight casualties in road traffic accidents

**Cross reference to other policies and strategies**

LTP3 Supplementary Document - Smarter Choices

LTP3 Supplementary Document – Road Safety

Strategic Plan for accident Reduction (SPAR)

Sustainable Modes of Travel to School Strategy 2010

Transport Asset Management Plan

Active Swindon Strategy - December 2009 - September 2015

## **Equality of opportunity.**

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

6.155 Equality of opportunity issues arise for many groups.

- People without access to a car (including those in car owning households where, for example another family member is using the car during the day)
- People on low incomes
- People living in rural area
- People with disabilities
- Young people
- Older people

6.156 We need to tackle the problems of getting around. This is especially important for those in disadvantaged groups or areas. Gaining access to education, training, employment and health facilities is of particular importance to those groups. The Local Transport Plan aims to meet the transport needs of all members of the community. The Equalities Impact Assessment carried out as part of the preparation of the plan will ensure that this happens.

6.157 The main themes in this area are –

*Maintain and improve access for all residents to key services ensuring that those from deprived areas, those without access to a car, and those from minority groups have an equal level of access as the rest of the community.*

*Improve access to services for those who live in rural areas.*

*Assist in the regeneration of neighbourhood renewal areas.*

*Provide a transport network that meets the needs of people who are disabled.*

### **Local relevance of Goal**

6.158 Accession software supplied by Department for Transport has been used to identify inequalities in access to facilities across Swindon and will continue to be used as a tool to monitor changes during the LTP3 period.

6.159 Accessibility to key services is a central component in overcoming social exclusion; in particular this relates to the availability of health facilities, education, employment, affordable food and (to a lesser extent) leisure facilities. In this wider social exclusion context it is therefore important to consider that accessibility is not simply the ability to get to places by bus (or other means), but the conceptual availability of services where and when they

are needed; so, for instance, this could include mobile or on-line services. In the context of the LTP though, accessibility relates mostly to the ability to travel around the Borough, in order to reach the locations of key services.

6.160 Notwithstanding adverse comments about some features of bus services in Swindon, accessibility in the town is relatively good. The bus network provides good physical coverage of the urban area, and it is possible to get to central areas (in particular) in reasonable time from most of the town. However, Swindon Transport Strategy consultation responses noted that there is a specific problem with travelling north to south across the town.

6.161 Table 6.10 shows the main accessibility indicators as derived initially for LTP2, and re-calculated in 2008 with 2007 bus services and locations (such as new schools) and in 2010 with 2009 information. This shows that accessibility in Swindon by public transport is reasonably good overall, although there are some relatively long journey times for significant numbers of people to the hospital.

6.162 For instance, only around 50% of all households in the Borough can get to the hospital within 30 minutes travelling time, using, although almost all can within 60 minutes (2009 figures). Access to the town centre reflects the focus of the bus network on routes to the centre, and around 90% of households are within 30 minutes of the town centre by public transport; a greater proportion of households without access to a car have access (just over 95%).

6.163 To illustrate accessibility graphically, Figure 6.1 shows accessibility to the Swindon town centre, as a series of journey time contours. Accessibility to other key services is also important as noted earlier, and as an example, Figure 6.2 shows accessibility to workplaces and Figure 6.3 to the hospital. It should be noted that these contour maps show the shortest journey time to the nearest relevant location, which may not be the 'best' (or chosen) destination. As such, the limitations in orbital journey opportunities afforded by the bus network may not be apparent.

Table 6.10: LTP2 Core Accessibility Indicators Public Transport Journeys

Destination	Indicator (all Public Transport & Walk)			2006			2007			2009		
	Time Period	Population	Interval (mins)	number	%	SBC total	number	%	SBC total	number	%	SBC total
<b>Primary Schools</b>	Tue 07-09:00	Pupils of compulsory school age	15	29,564	98.0%	30,155	29,988	98.0%	30,596	30,785	97.6%	31,541
			30	29,878	99.1%	30,155	30,311	99.1%	30,596	31,043	98.4%	31,541
<b>Secondary Schools</b>	Tue 07-09:00	Pupils of compulsory school age	20	27,643	91.7%	30,155	27,464	89.8%	30,596	27,677	87.7%	31,541
			40	29,864	99.0%	30,155	30,297	99.0%	30,596	31,042	98.4%	31,541
<b>Further Education</b>	Tue 07-09:00	People aged 16-19	30	7,682	90.1%	8,527	7,837	90.7%	8,642	8,433	94.9%	8,888
			60	8,452	99.1%	8,527	8,564	99.1%	8,642	8,789	98.9%	8,888
<b>Work (3+ locations)</b>	Tue 07-09:00	People of working age (16 to 74)	20	114,560	82.5%	138,904	117,557	83.2%	141,236	120,883	82.7%	146,196
			40	137,452	99.0%	138,904	139,743	98.9%	141,236	144,091	98.6%	146,196
<b>Work (6+ locations)</b>	Tue 07-09:00	People of working age (16 to 74)	20	92,646	66.7%	138,904	95,102	67.3%	141,236	93,541	64.0%	146,196
			40	137,388	98.9%	138,904	139,675	98.9%	141,236	144,060	98.5%	146,196
<b>Hospital</b>	Tue 10-12:00	Households	30	40,130	50.4%	79,561	39,847	49.3%	80,897	42,151	50.3%	83,726
			60	78,642	98.8%	79,561	79,959	98.8%	80,897	82,649	98.7%	83,726
		Households without access to a car	30	10,665	62.3%	17,132	10,579	61.0%	17,345	10,901	61.3%	17,778
			60	17,066	99.6%	17,132	17,276	99.6%	17,345	17,696	99.5%	17,778
<b>GP surgery</b>	Tue 10-12:00	Households	15	76,057	95.6%	79,561	77,337	95.6%	80,897	80,665	96.3%	83,726
			30	78,685	98.9%	79,561	80,000	98.9%	80,897	82,811	98.9%	83,726
		Households without access to a car	15	16,869	98.5%	17,132	17,177	99.0%	17,345	17,585	98.9%	17,778
			30	17,068	99.6%	17,132	17,278	99.6%	17,345	17,724	99.7%	17,778
<b>Town Centre</b>	Tue 07-09:00	Households	15	21,229	26.7%	79,561	21,718	26.8%	80,897	20,083	24.0%	83,726
			30	71,844	90.3%	79,561	71,986	89.0%	80,897	76,080	90.9%	83,726
		Households without access to a car	15	6,587	38.4%	17,132	6,718	38.7%	17,345	6,379	35.9%	17,778
			30	16,275	95.0%	17,132	16,456	94.9%	17,345	17,053	95.9%	17,778

Figure 6.1: PT accessibility to town centre (Oct'09, Tuesday, 10:00-12:00)

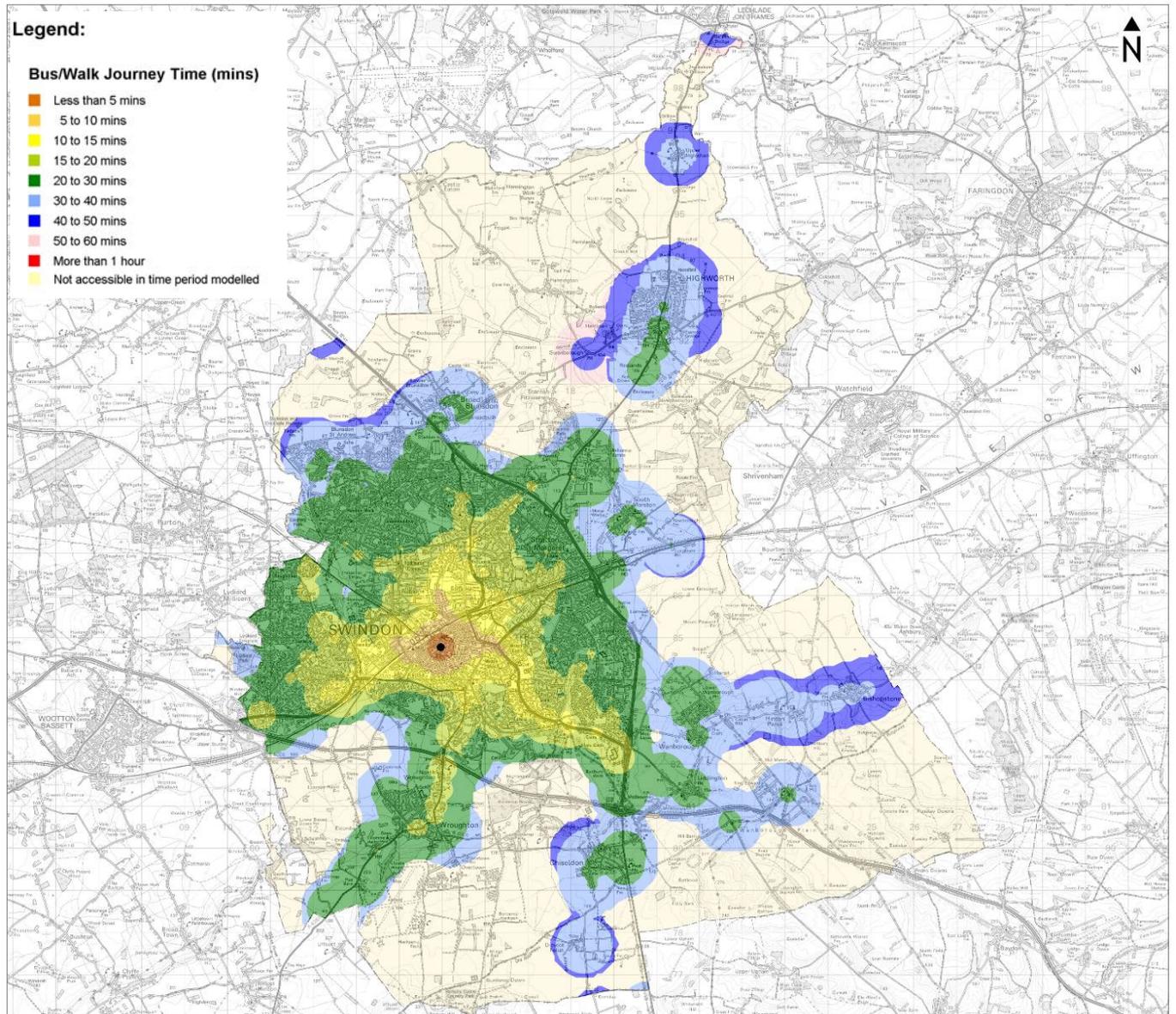


Figure 6.2: PT accessibility to workplaces (Oct'09, Tuesday, 07:00-09:00)

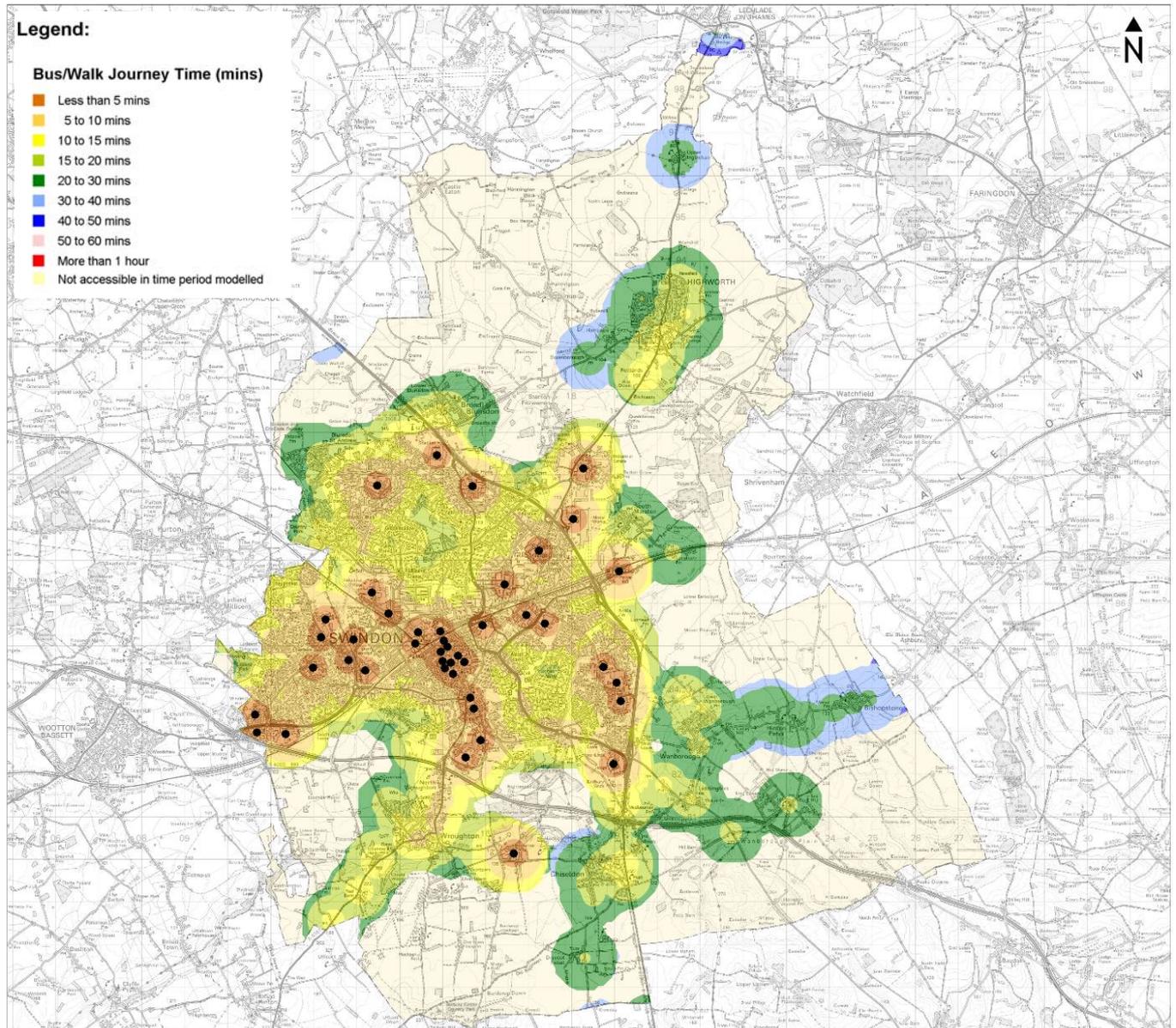
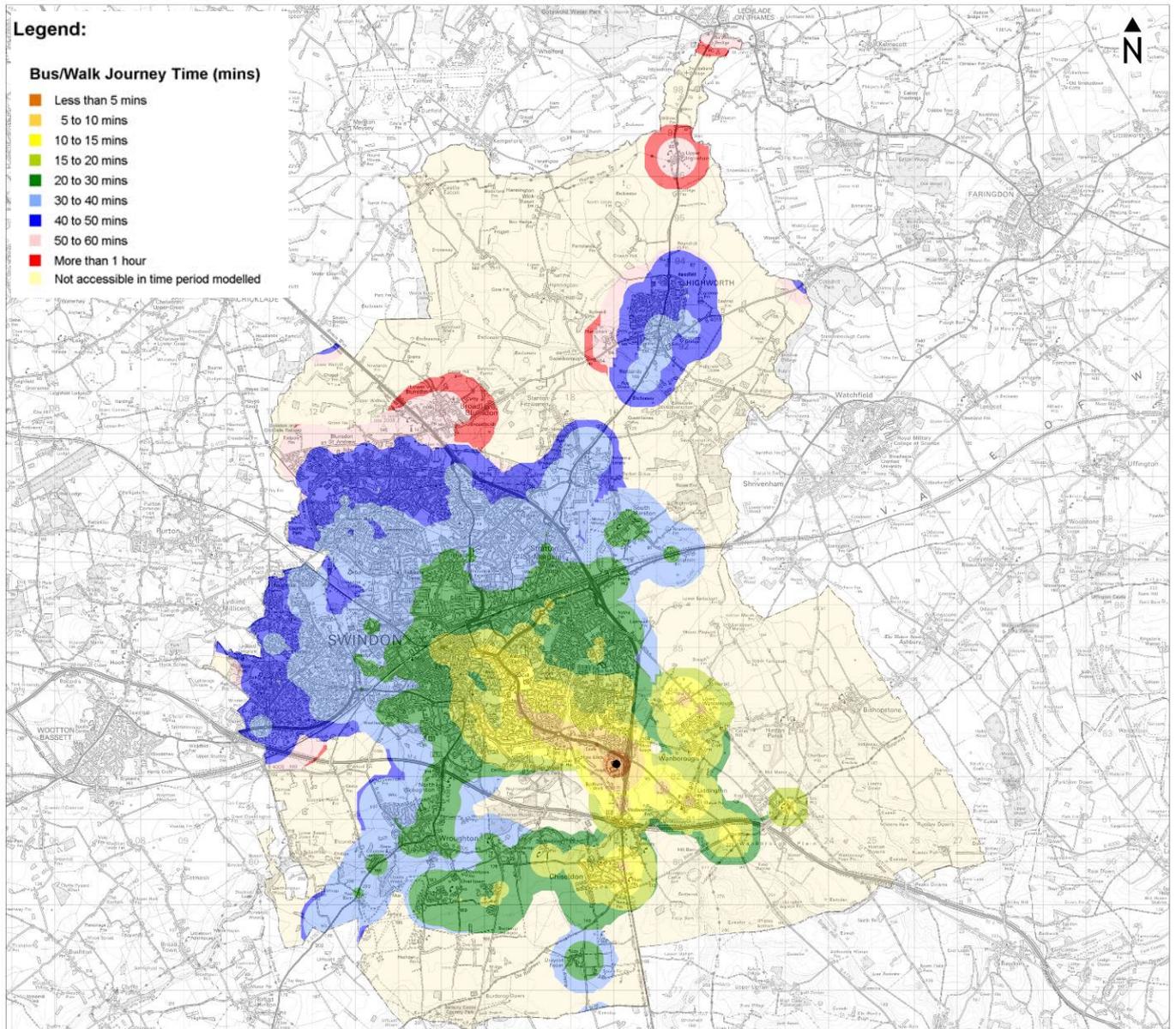


Figure 6.3: PT accessibility to Great Western Hospital (Oct'09, Tuesday, 10:00-12:00)



6.164 There are extremes of poverty and wealth in Swindon. Of the 119 Super Output Areas in the Borough; 18 are amongst the most deprived 20% nationally, 8 of these 18 areas are also within the most deprived 10% nationally and, 1 is within the most deprived 5% nationally. Within life expectancy figures there are major variations with those in the lowest quartile for social deprivation in Swindon having a life expectancy of nearly 7 years below those from the highest quintile (75.7 years in Parks compared with 82.6 years in Covingham/Nythe. Cardiovascular disease, respiratory disease and all cancers are all major contributors to the gap in life expectancy for men and women between the most deprived wards and the rest of Swindon. Targeting these factors will be important in reducing this inequality. The areas with health inequalities are also poor performers in relation to economic indicators and have poor educational attainment. Transport can contribute to addressing these health inequalities through promoting healthy travel choices in partnership with the health and leisure sectors.

6.165 Although Swindon has a comparatively high level of car ownership overall, there are several areas where ownership levels are lower, which coincide with those locations where overall deprivation is most acute. 22% of households do not have access to a car. This rises to over 35% of households without access to a car in the most deprived Wards. It is particularly important that these areas are well served by public transport, as well as walking and cycling routes, if residents are to access employment and other opportunities.

6.166 However, accessibility in areas within Swindon that score the worst in terms of the Index of Multiple Deprivation (IMD) is generally good in affording opportunities to access the town centre, education and workplaces. It is also possible to get to the hospital, but journey times tend to be long. Bus services in these areas also tend to be strong, as the lower levels of car ownership tend to result in higher bus use. A key challenge for the Local Transport Plan is to ensure the existing levels of accessibility are not threatened by any new transport measures which emerge, in particular when balancing competing demands for available funding.

6.167 Even in households with access to a car there can be issues where for example the main breadwinner has the car all day to get to work. This leaves the rest of the household without access to a car for their travel needs. They are as reliant on walking, cycling or public transport as those who are in households without any access to a car.

## Age

6.168 The current demographic structure for Swindon is as follows:

Table 6.11: Population by Age Group for the Borough of Swindon						
	Census 2001		Mid 2007 ONS estimate		Mid 2008 ONS estimate	
Group 0-19	45882	25.48%	47000	24.80%	47600	24.69%

Group 20-29	24028	13.35%	24000	12.66%	24600	12.79%
Group 30-39	31544	17.52%	30200	15.94%	30200	15.65%
Group 40-49	25173	13.98%	30300	15.99%	30900	16.04%
Group 50-59	20645	11.47%	22000	11.61%	22400	11.59%
Group 60-70	15135	8.41%	16900	8.92%	17700	9.15%
Group 70+	17644	9.80%	19100	10.08%	19500	10.10%
Total	180051		189500		192900	

6.169 It is projected that the proportion of children aged 0-9yrs in Swindon will remain stable over the next 20 years, whilst there will be a slight decrease in the proportion of people aged 20-55yrs. Critically however the number of people in Swindon aged over 65 years or above will increase by 64.1% over the next 20 years. Whilst these forecasts take into account of migration, the figures do not account for any new housing development that may occur during the time periods outlined and thereby underestimate the working age population. The demographic profile of Swindon and the long-term population projections during the lifetime of LTP3 will have great implications for transport provision and spending allocations. For example there will be greater demands on initiatives and resources such as the concessionary fare available to all citizens aged over 60 or anyone who has a recognised disability. During the 2009-10 financial year, 3,505,379 journeys using a national concessionary bus pass originated from within the Borough of Swindon at the cost of £2,964,000 for Swindon Borough Council (including a government support grant of £738,000).

### Older people

6.170 The Department for Transport “Older People: Their Transport Needs and Requirements” (2001) states that the need to meet the transport requirements of a growing population of older people is vital to the success of the government's commitment to sustainable mobility and people's own ability to retain a high quality of life as their income, health and mobility levels change. Amongst the most significant barriers to mobility are physical difficulties associated with walking and accessing public transport. Common concerns include:

- Poor condition of pavements;
- Inadequate crossing facilities;
- Boarding/alighting buses and trains; and steps at railway stations.

6.171 Lack of awareness, particularly regarding special transport schemes like Dial-A-Ride and Shopmobility, can mean that those with the greatest need fail to benefit from services that have been specifically implemented to help them. The DfT recognises the stigma attached to such schemes that can prevent people from using them. Older people worry more about their safety because they are likely to be more severely injured, take longer to recover and suffer greater psychological impact than a younger person in a similar incident. .

6.172 The Department for Transport report, “Understanding the Travel Needs Behaviour and Aspirations of People Later in Life” was produced in 2007. The policy implications suggested as an outcome of this report, recognise the importance of factors other than age in shaping transport use patterns in particular in relation to health status and cost. Transport is important to older people for basic needs (e.g. reaching basic services etc) but also to psychological and emotional needs, visiting friends and family and integrating within the local community. Barriers to using public transport caused by declining health need to be removed through changes in bus design and transport staff training. Perceptions of insecurity of travelling on public transport, especially at night, need to be addressed.

### Younger people

6.173 The Department for Transport report, “Becoming Mobile: Children, young people and transport” shows that:

- A third of trips made by people under the age of 17 were for education.
- A fifth of all trips to visit friends.
- A fifth were escort trips.
- A tenth were trips for sport and entertainment.
- 58% of parents of children aged 7-10 cited traffic danger as a reason for escorting their children to school.
- 79% of children aged 7-10 were accompanied by parents or adults to school compared to 29% of those aged 11-13 years (2005).
- Young people between the ages of 17 and 20 made more use of public transport than any other age group.
- Young people were less likely than adults to feel secure on public transport: 30% had concerns for their personal security when using public transport (2004).
- Young people particularly those in rural areas tended to see cars as essential in accessing higher education, employment and leisure opportunities.
- 40% of young people in rural areas said that transport issues influenced their decisions about post 16 education.
- The barriers to mobility among children and young people included safety school policies and the availability, reliability and cost of public transport.

### Gender

6.174 Using Office of National Statistics (ONS) formula, rounded to the nearest hundred, highlights the gender split in Swindon is well balanced, with only a 0.02% percentage split of in favour of the male population.

Table 6.12: Population by Gender for the Borough of Swindon			
	Census 2001	Mid 2007 ONS estimate	Mid 2008 ONS estimate <sup>2</sup>

Female	90491	50.30%	94700	49.97%	96300	49.99%
Male	89560	49.70%	94800	50.03%	96600	50.01%
Total	180051		189500		192900	

6.175 The Department of Transport report on “Gendered Mobility: Women, Men and Transport – Gender Disparity and Accessibility” found that:

- Men are most likely to travel for work purposes.
- Women make more social and personal business journeys.
- Many trips made by women in their 30s are escort trips (for example taking children to school).
- Time, cost and complexity of travelling by public transport was a deterrent in many cases.
- Difficulties of travelling with children were highlighted through consultation with women.
- 23% of all men’s journeys are work related compared to 14% of women’s.
- 81% of men hold full driving license compared with 61 % of women.
- Women’s safety concerns – DfT (2004) found that women were more likely than men to have been the victim of sexual assault or harassment; however, men were more likely than women to have experienced or witnessed all other types of crime and anti social behaviour, particularly physical violence.
- Transport and work – many women are unwilling or unable to travel far to work thus limiting the employment opportunities open to them.
- 80% of men compared to 11% of women travel more than 30mins to work.

6.176 The 2001 Census Travel to Work data highlighted that approximately 80,000 people both live and work within Swindon Borough. Of those that commute into Swindon from the surrounding districts 57% are males and 43% are females. This division in gender becomes more marked as the distance from Swindon increases. Possible reasons for males to be more likely to commute further distances to work than females are differences in wages between males and females or greater family commitments for females.

## Religion

6.177 Christianity is the dominant religion of the population group within the Borough of Swindon, however there are also a number of diverse faith backgrounds that need to be taken into consideration.

	2001 Census		Mid 2007 estimate		Mid 2008 estimate	
Buddhist	510	0.28%	530	0.28%	540	0.28%
Christian	126157	70.07%	133520	70.47%	135930	70.47%
Hindu	1000	0.56%	1030	0.54%	1040	0.54%

Jewish	127	0.07%	140	0.08%	150	0.08%
Muslim	1851	1.03%	1900	1.00%	1940	1.00%
Sikh	1013	0.56%	1060	0.56%	1080	0.56%
Other	647	0.36%	680	0.36%	690	0.36%
No Religion	34437	19.13%	35620	19.13%	36240	19.13%
Declined to Disclose	14309	7.95%	15000	7.95%	15290	7.95%
Total	180051		189480		192900	

## Race

6.178 It is forecast that in 2008, the projected Non Black Minority Ethnic population (BME) accounts for 88.53% of the Borough of Swindon residents, with BME population accounting for 11.47%, (based on 2006 data).

Table 6.14: Population by Ethnic Group for the Borough of Swindon						
	2001 Census		Mid 2006 experimental estimate		Mid 2008 estimate based on 2006 data	
Asian or Asian British	3837	2.13%	5900	3.16%	6100	3.16%
Black or Black British	1268	0.70%	2000	1.07%	2000	1.07%
Mixed	2045	1.14%	2700	1.45%	2800	1.45%
Other Ethnic Groups	1492	0.83%	2300	1.23%	2500	1.23%
White Minority Ethnic	6702	3.72%	8500	4.56%	8800	4.56%
Total	180051		186600		192900	

Population by BME and non-BME the Borough of Swindon						
	2001 Census		Mid 2006 experimental estimate		Mid 2008 estimate based on 2006 data	
BME	8642	4.80%	21400	11.47%	22200	11.47%
Non-BME	171409	95.20%	165200	88.53%	170700	88.53%
Total	180051		186600		192900	

6.179 However reference to the latest school census conducted in January 2010 suggests that White British account for 81.34% of the student population within the Borough with Black and Minority Ethnic accounting for 18.66% of the school population.

6.180 From Swindon Borough Council's Passenger Transport Group details of ethnic minorities take up of concessionary bus passes have been obtained, (although there are concerns these maybe under-represented). From the current holders of the concessionary bus pass, 96.9% are from non-BMEs with 3.1% from BME population groups. Analysis from the

demographic structure for Swindon suggests the BME population aged over 60 in Swindon is 8.3%

6.181 The Department for Transport's Paper 'Mobility in Adulthood: General Findings, Low Income, Ethnicity and Rural Communities (2008) found that:

- Adults from black and minority ethnic groups are more likely to depend on public transport than white adults.
- Fear from racial attacks and difficulties with language can create barriers to public transport use for those from black and ethnic minorities.
- Bus times often relate to out of date patterns of shopping and work and link to Christian holidays which often does not reflect the modern community.
- People in households of black or ethnic origin are least likely to have access to a car or to travel to work by car.
- However, 45 % of people of Indian origin are reported to have a car compared to 44% of white British or 39% of white Irish households.
- Research shows that 23% of young people from black and minority ethnic groups experienced harassment due to their colour, race or religion, on public transport.
- Also reported is the exclusion of people in minority groups from the accessibility planning process and an overall inadequate understanding of the transport needs of minority and ethnic and faith communities.

## Disability

6.182 The Disability Discrimination Act 1995 defines a disabled person as someone who has a physical or mental impairment that has a substantial and long term adverse effect on his or her ability to carry out normal day to day activities. In Britain 22% of adults are covered by the Disability Discrimination Act and around one fifth (6.9 million 19%) of people of working age have a long-term disability. Swindon Borough Council data highlights that 15.26% of the population have some form of disability.

	2001 Census		Mid 2007 projected estimate		Mid 2008 estimate based on 2007 data	
Disabled	27476	15.26%	29306	15.26%	29900	15.26%
Non-disabled	152575	84.74%	160173	84.74%	163000	84.74%
Total	180051		189479		192900	

6.183 Swindon Borough Council, through its Network Management service unit has a rolling programme focusing on:

- Bus stop upgrades – there is a rolling programme of bus stops upgrades with 429 out of 995 bus stops in the Borough currently meeting a set criteria of accessibility indicators.
- dropped kerbs where appropriate – approximately £7 300 was spent on 11 sets dropped kerbs works during the 2009/2010 financial year.
- upgrade signals for pedestrian crossings to appropriate standards for disabled users

6.184 Whilst the Swindon rates of visual impairments are comparable to the South West region and England, an ageing population will result in an increasing number of people with visual impairments in the Borough. For example for the over 65 years aged group, the number of citizens will increase from 2 467 in 2010 to an estimated 2 654 by 2013.

6.185 Approximately 3% of the Borough's population aged 16-64 years have moderate to severe learning disabilities and this figure is due to rise as the population increases over the lifetime of the LTP3 programme. Trends of this nature will need to be taken into consideration when planning future provision of public transport services.

6.186 The Transport Advisory Committee Study on the Attitudes of Disabled People to Public Transport (2002) found that

- Disabled people travel a third less often than the general public.
- Disabled people drive cars less often, and are less likely to have one in the household.
- The most common mode of transport for disabled people is a car driven by someone else.
- Almost half of disabled people use some initiative for disabled people to make travel easier.
- 13% do not find it easy to get travel information on any kind of travel service. However, overall 39% felt well informed during journeys and 48% do not.
- In many respects the transport priorities of disabled people differ very little from the general population and their main requirement is for frequent and reliable services.
- Other requirements relate to the softer aspects of public transport such as improving staff attitudes to people with disabilities and training staff in dealing with people with disabilities.

6.187 Evidence collected by the Disability Rights Commission suggests that disabled people's confidence in using public transport is significantly lower than that of non-disabled people. Disabled people are four times more likely to lack confidence in using public transport services than non-disabled people (26 per cent compared to 6 per cent). However a limitation of this source is the lack of comparable data for previous years on the specific question of confidence. This means it is not possible to track change over time.

6.188 There is evidence that the physical accessibility of public transport (and buses in particular in some parts of the country) has improved during the lifetime of the Disability Rights Commission (DRC), which is likely to have helped to improve levels of confidence. For example, over 4,400 compliant rail vehicles had been introduced into service by 2005 and 46 per cent of the bus fleet was accessible. It is also evident, that transport accessibility varies considerably between both regions and cities and other areas.

6.189 From a Swindon context, the public transport network offers level access to the platforms of Swindon Rail Station, (the only rail station in the Borough) via lift access. The local bus fleet has undergone a programme of fleet modernisation with a high proportion of local services now operated by low-floor buses offering level boarding entry.

### **Alignment with other local strategies**

6.190 The Swindon Community Strategy “Shared Vision for Swindon 2008-2030” includes the following key themes that relate to this DaSTS Goal –

–

- Maximise the benefits to all Swindon people from a growing local economy, with a particular focus on technology, noting that investment in transport technology and the benefits that could be accrued from easier communications will need to be part of this.
- The safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling.
- A healthy, caring and supportive community that recognises provision of services and facilities, and accessibility to them
- A place where high aspirations are supported by superb education provision for all ages’, linking to the need for a skilled workforce and maximising benefits for all in a growing and high tech economy.

6.191 The “One Swindon” initiative includes the following key theme that relates to this DaSTS Goal –

- We can all benefit from a growing economy and a better town centre
- Everyone is enjoying sports, leisure and cultural opportunities
- Living independently, protected from harm, leading healthy lives and making a positive contribution.

6.192 A strategy has been established to address each of the themes for this Goal.

**Maintain and improve access for all residents to key services ensuring that those from deprived areas, those without access to a car and those from minority groups have an equal level of access as the rest of the community.**

6.193 The Accession software has shown a generally high level of access to services and facilities across Swindon even amongst those from deprived areas and those without access to a car. The key challenge in this theme is to maintain these levels in the face of budget pressures and changes to the location of many services. Spending restraints are likely to result in re-evaluation of both the commercially operated bus network as well as the services subsidised by the Council. In addition there is likely to be further pressure to centralise services or curtail local provision of services such as post offices, health centres and libraries. This will increase the demand for transport provision just as resources for transport are likely to be restricted.

6.194 Lack of information about travel choices reduces people's perceptions of the availability of employment and training opportunities. Improved information may open up possibilities in terms of access to services which may not have previously been recognised.

6.195 The LTP Diversity Impact Assessment has raised a number of issues which need to be considered in ensuring equality of access to services.

- How to communicate information on transport services to ethnic and faith groups?
- How to reduce personal safety and security concerns of ethnic and faith groups around the public transport network?

These issues will be included in the work on these particular areas throughout the LTP strategy.

6.196 For this theme our strategy is based on –

- Working with partners to safeguard and promote local services such as health and education in order to reduce the need to travel.
- Working with bus operators to maintain the highest level of commercially operated bus services
- Providing replacement subsidised services where commercial bus services are not available (in line with the criteria set out in the Bus Strategy)
- Promote walking and cycling for local journeys.
- Examine cost effective options to conventional bus services – such as demand responsive services, lift sharing.
- Monitor accessibility using the Accession software
- Work to enhance people's awareness of the range of travel options that are available to them both in terms of type of transport and costs.
- Support the provision of internet access for all members of the community

### **Improve access to services for those who live in rural areas.**

6.197 The Accession software has shown a generally high level of access to services and facilities across Swindon even amongst those from deprived

areas and those without access to a car. In rural areas, where population densities are lower, levels of accessibility by public transport, walking and cycling are not as good. However levels of car ownership (and multiple car ownership) are higher.

6.198 Although the 2001 Census reported 155,400 people out of the total Borough population of 184,000 as living in the Swindon urban this still left a substantial number (28,600) living in the rural areas of the Borough (including the small towns of Highworth and Wroughton). Those without access to a car in rural areas can feel far more isolated than those in urban areas. Opportunities for walking, cycling and public transport are less because of the distances involved and the lower level of service provision. There are often fewer facilities locally available and many public services are now concentrated in urban locations. Providing transport facilities in rural areas is often significantly more expensive than in urban areas because of the greater distances and lower population density.

6.199 For this theme our strategy is based on –

- Working with partners to safeguard and promote local services such as health and education in order to reduce the need to travel
- Support conventional public transport services in rural areas while examining opportunities for cost effective demand responsive and community based transport schemes
- Through the Rights of Way Improvement Plan continue to enhance the provision, maintenance and legibility of walking and cycling routes in rural areas.
- Use the Development Management process to ensure access provision is considered in all new rural developments
- Considering the needs of rural residents who have limited availability of public transport when providing facilities for the private car (including car parking) in the town centre and at other major destinations.
- Support the provision of internet access for all members of the community

### **Assist in the regeneration of neighbourhood renewal areas.**

6.200 Transport can contribute to the regeneration of neighbourhood renewal areas by improving access to local services within the areas and by improving links between the areas and other key services and facilities. The Accession software has indicated that Swindon's Neighbourhood Renewal Areas have very good levels of accessibility. During the LTP2 period work has therefore concentrated on more localised improvements to walking and cycling facilities to increase accessibility within each area to local facilities. This has tied in with a programme of upgrades to local shopping parades in these areas which also act as focal points for a range of other facilities such as libraries and post offices. This will continue during LTP3 while ensuring general accessibility to facilities further away does not deteriorate and also ensuring better information is made available on the transport options that already exist in each area.

6.201 For this theme our strategy is based on –

- Working with partners to safeguard and promote local services in these areas such as health and education in order to reduce the need to travel.
- Encourage walking and cycling to local facilities through infrastructure improvements and selective promotional activity.
- Work to improve road safety in these areas in connection with the Road safety Strategy (SPAR)
- Work with partners to reduce crime and the fear of crime and disorder on the transport network
- Support the provision of internet access for all members of the community

**Provide a transport network that meets the needs of people who are disabled.**

6.202 With an ageing population the number of people with a disability or other form of long term restriction on their mobility is likely to increase. As well as physical disabilities, deafness, visual impairment and learning difficulties all have an impact on the ability to travel around the area with ease. It is often people with disabilities that are most reliant on public transport and good pedestrian links because their disability prevents them from driving a car.

6.203 A great deal of work has been done during the LTP2 period to provide a transport network that increasingly meets the needs of people who are disabled. Conventional bus services are more accessible than ever before with a high proportion of buses that meet the requirements of the Disability Discrimination Act and more and more bus stops that have been provided with raised kerbs are improved boarding areas. In addition to these improvements free concessionary travel passes are now available to disabled people in Swindon.

6.204 Work continues to upgrade the busiest road crossings with dropped kerb facilities for pedestrians and to provide the latest equipment and tactile surfaces at traffic signalled crossings.

6.205 Conventional bus services cannot meet the needs of everyone and dial a ride and demand responsive “shared taxi” type services help fill the gaps for those who require more specialised transport facilities. Such services are, however, relatively expensive and further ways to improve their coverage while containing costs are being examined. Joint provision with other service areas such as health, social services and education is being considered.

6.206 For this theme our strategy is based on –

- Work with bus operators to increase the number of vehicles that meet access requirements
- Specify accessible vehicles for Council tendered services

- Upgrade bus stops to improve accessibility
- Require the hackney carriage fleet to meet access standards
- For those who can not access conventional public transport services, provide specialist dial a ride type services

6.207 The following targets contribute to promoting equality of opportunity.

Access to services and facilities by walking, cycling and public transport  
Bus journeys – increase in number of bus passengers

**Cross reference to other policies and strategies**

LTP3 Supplementary Document - Smarter Choices

Sustainable Modes of Travel to School Strategy 2010

Transport Asset Management Plan

## Quality of life

### **DaSTS Goal – To improve quality of life for transport users and non transport users, and to promote a healthy natural environment**

6.208 Transport affects quality of life. Transport has a direct impact on our day to day activities and experiences. Impacts can be positive and negative. The Local Transport Plan seeks to reduce the negative impacts and increase the positive impacts of transport on the quality of our lives.

6.209 Quality of life is affected by many factors. The Local Transport Plan needs to consider those directly related to traffic levels (e.g. noise, air pollutants) as well as those areas where it would be possible to improve conditions for transport users and non-users alike (e.g. end-to-end journey experience and improvements to local streetscapes).

### **Alignment with other local strategies**

6.210 The Swindon Community Strategy “Shared Vision for Swindon 2008-2030” includes the following key themes that relate to this DaSTS Goal –

- Swindon as ‘destination of choice’ and has the objective of making Swindon a national icon for growth on a sustainable basis
- Maximise the benefits to all Swindon people from a growing local economy, with a particular focus on technology, noting that investment in transport technology and the benefits that could be accrued from easier communications will need to be part of this.
- The safeguarding of the environment for future generations, promoting local shops and employment for new residential areas coupled with access to fast and frequent public transport, as well as a safe and good quality network for walking and cycling.
- A place where high aspirations are supported by superb education provision for all ages’, linking to the need for a skilled workforce and maximising benefits for all in a growing and high tech economy.
- A place where local people can have real influence and where they feel safe (in particular in relation to reducing road accidents)

6.211 The “One Swindon” initiative includes the following key themes that relate to this DaSTS Goal –

- We can all benefit from a growing economy and better town centre.
- I like where I live.
- Everyone is enjoying sports, leisure and cultural opportunities.
- Living independently, protected from harm, leading healthy lives and making a positive contribution.

6.212 The main themes in this area are –

*Minimise the impacts of transport on the natural and historic environment.*

*Enhance the journey experience.*

*Reduce the number of people exposed to high levels of transport noise.*

*Promote better access to a range of goods, services, people and places.*

*Enhance the streetscape, public spaces and the urban environment.*

*Improve access to leisure activities and the countryside*

*Reinforce and connect existing green spaces along Swindon's green corridors*

*Promoting good health through active travel.*

A strategy has been established to address each of these themes.

### **Minimise the impacts of transport on the natural and historic environment.**

6.213 Chapter 8 sets out the process for undertaking a Strategic Environmental Assessment (SEA) for the Local Transport Plan as required by European Directive 2001/42/EC and UK Statutory Instrument 2004/1633. The aim is to protect the environment and integrate environmental considerations into the Local Transport Plan. The SEA needs to consider the impacts of the plan on special areas of conservation such as Areas of Outstanding Natural Beauty.

6.214 For this theme our strategy is based on –

- Mitigating the impacts of Local Transport Plan policies through the Strategic Environmental Assessment and Habitats Regulation Assessment processes as required.

### **Enhance the journey experience.**

6.215 Daily experience of journeys can be very variable and have an impact on quality of life. Road delays and congestion, inadequate public transport, walking and cycling facilities, traffic noise and pollution, slow journey times, poor co-ordination and fear of crime and anti social behaviour on public transport can all contribute to a perception that transport has a negative impact on quality of life locally. This can be reflected in the overall attractiveness of Swindon as a place where people want to live and work. The Local Transport plan is all about improving the end- to-end experience of transport users. The proposals around walking, cycling public transport and management of the highway network will all contribute to enhancing the journey experience.

6.216 For this theme our strategy is based on –

- Implementing the programme of schemes in the Local Transport Plan to improve public transport, walking, cycling and the management of the highway network

**Reduce the number of people exposed to high levels of transport noise.**

6.217 Transport is the most pervasive source of noise in the environment. For most people, road traffic is the main cause of exposure to ambient noise. In Swindon areas of concern are around locations where residential neighbourhoods are adjacent to major roads. These include strategic roads such as the M4 and A419 as well as major urban roads with high traffic volumes such as Great Western Way, Cirencester Way and Queens Drive.

6.218 The impact of highway noise on residents can often be reduced through selective maintenance of the road surface at particular locations and the direction of heavy traffic flows and goods vehicles onto the most appropriate parts of the network. Erection of noise barriers can also be considered where there are no alternative measures available.

6.219 For this theme our strategy is based on –

- Targeted highway maintenance to reduce road noise
- Review of the network hierarchy to ensure goods vehicles and significant traffic flows are directed onto the most appropriate roads
- Review data on noise pollution and incidents of public concern about transport noise before considering further interventions.

6.220 The Department for Environment, Food and Rural Affairs (DEFRA) is preparing Noise Action Plans as required by the European Union Directive on the Assessment and Management of Environmental Noise (2002/49/EC). However, Swindon is not in the first tranche of areas to receive detailed “noise mapping” information from DEFRA. Information for Swindon is not expected to be available until 2012. At that time we will examine any areas that are identified as priority locations because of high road noise. We will then work to investigate what noise management measures might be appropriate and feasible for those specific locations.

**Promote better access to a range of goods, services, people and places.**

6.221 People want to have easy access to the range of goods and services they need for their everyday lives. This topic is covered in the Chapter on the DaSTS Goal “Promoting Equality of Opportunity”. It does however, contribute to the “Quality of Life” Goal also.

6.222 For this theme our strategy is based on –

- Working with partner service providers and through land use planning to ensure services are available locally thereby reducing the need to travel.
- Monitoring access to services across the Borough particularly for those without a car.
- Maintaining a comprehensive public transport, walking and cycling network that allows access to a wide range of goods and services for both existing residential areas and in new developments.

### **Enhance the streetscape, public spaces and the urban environment.**

6.223 Shortcomings in the design and maintenance of public spaces, streets and highways, street furniture, lighting and signage affect the perception of the local environment. Standards of highway maintenance can be critical to the perception of the quality of the urban environment.

6.224 Transport infrastructure needs to be of high quality design so that it makes a positive contribution to the character and appearance of the Borough. Transport planning needs to recognise local context and character. Streets make up the greatest part of the urban realm and need to be designed to create attractive spaces where people live, work and spend leisure time. Movement through the area needs to be well designed to encourage people to walk, cycle and use public transport reducing car use particularly for short journeys. Opportunities for improving access and movement arise through securing good design in new developments and in regeneration schemes.

6.225 Residential areas with poorly designed parking can suffer from parking on pavements and unsightly and obstructive parking on-street whilst garages and parking areas are unused.

6.226 Substandard public transport infrastructure and poor facilities for cycling and walking hinder efforts to promote sustainable travel choices and improve accessibility for those without cars.

6.227 Re-design of the highway in deprived areas can have wider benefits to the community. Home Zones have shown reduced road casualties when traffic speeds and volumes are reduced: reduced crime when areas are made more attractive for walking and cycling; improved health through greater levels of walking and cycling; and greater community cohesion when neighbours are able to meet and interact in the street environment.

### **Design standards for new highway infrastructure or schemes**

6.228 Dependent on the circumstances and agreement with the Highway Authority, the standards contained in either Design Manual for Roads and Bridges (DMRB) or Manual for Streets (MfS) will be required to be used when designing new highway infrastructure or schemes.

6.229 The general principle is

Use Design Manual for Roads and Bridges (DMRB) on

- All “A” and “B” (class 1 and 2) roads regardless of speed limits or known speeds;
- All classified unnumbered roads (class 3 or C) subject to a limit of 40mph or more;
- Unclassified roads subject to a 40mph limit or more that are on bus routes or serve industrial premises with no alternative access.

Use Manual for Streets (MfS) on

- All new roads in residential areas designed so that speeds should not exceed 30mph;
- All unclassified roads with a speed limit of 30mph or less;
- All unclassified roads with frontage development along both sides and where speeds are known to be unlikely to exceed 30mph

6.230 A mixture of standards taken from both DMRB and MfS will be required in circumstances other than those mentioned above. However, developments should be assessed independently and agreement with the Highway Authority should be sought at an early stage.

6.231 New schemes will also be subject to safety audits and user audits, including cycle and pedestrian audits to ensure the scheme does not form a barrier that discourages walking and cycling to key trip attractors.

6.232 For this theme our strategy is based on the Development Management Policies set out in Swindon’s LDF Core Strategy (particularly DMP1 – High quality Design) including–

- Securing good design, respecting context and character, and reducing the dominance of the car in new developments and regeneration areas
- Revised parking standards for new developments
- Reducing the dominance of the car in existing residential areas and at key destinations such as schools as well as severance caused by roads
- Improved maintenance of the transport infrastructure through the Transport Asset Management Plan

### **Improve access to leisure activities and the countryside**

6.233 The rights of way network has a key role in offering sustainable travel opportunities to access the countryside.

6.234 The Rights of Way Improvement Plan identifies opportunities to improve access to the countryside. It seeks to provide alternatives to car based leisure activities and thereby contributes to reducing congestion on rural roads and visitor destinations, improving air quality and promoting better health through active travel.

6.235 In developing existing leisure sites and establishing new attractions the planning process needs to take account of the ability of the widest cross section of the community to be able to access them in a sustainable way and which avoid generating lots of additional car trips.

6.236 There are also leisure activities that are based around sustainable transport modes.

6.237 For this theme our strategy is based on –

- Continued development and implementation of the Rights of Way Improvement Plan.
- Promotion of leisure activities based around sustainable transport such as countryside walks and use of the National Cycle Network.
- Promotion of public transport links to leisure sites and the countryside.
- Including consideration of transport provision in the planning process for new and developing leisure sites.

### **Reinforce and connect existing green spaces along Swindon's green corridors**

6.238 Community consultation has highlighted the importance of green space to Swindon's residents and the contribution it makes to people's well-being and quality of life. The Council policy is to reinforce and connect existing green spaces along Swindon's green corridors and to use them for a variety of purposes. The umbrella term for these assets and how they function is "Green Infrastructure".

6.239 Swindon's Green Infrastructure comprises of

- Biodiversity and Habitat sites
- Woodland, trees and hedgerows
- Green corridors, Rights of Way and Highways
- Historical site
- Parks, public and private open spaces
- Playing pitches
- Rivers, floodplains and water bodies
- Cemeteries
- Allotments
- Green roofs and buildings

6.240 They provide the following benefits

- Mitigating and adapting to the impacts of climate change
- Connecting and enriching biodiversity habitats and species
- Creating an attractive place where businesses want to invest and people want to live and work
- Providing access for recreation, play, learning, health and well being
- Creating spaces for community events and activities
- Promoting civic pride, ownership and local distinctiveness

- Enhancing landscape character and protect historical and cultural heritage
- Supporting tourism, food production and the local economy

6.241 Swindon has good access to a range of green spaces but there are significant gaps at the local level. A bigger issue for Swindon is the quality of the green spaces and the connections between them. To address this the Green Infrastructure Strategy promotes creation of green spaces in areas with a shortfall or improvements in areas where there is a deficiency in quality.

6.242 The River Ray, River Cole and the concentration of green spaces around Blunsdon Ridge form the spine of Swindon's network of green spaces. The main aim of the strategy is to protect, enhance and improve connections within these corridors. At the urban extensions these corridors will be extended and enhanced and will provide net biodiversity gain. A green spine will bring much needed greenery to Swindon town centre. It will help overcome the barrier created by the railway and create a central hub linking the River Ray and River Cole corridors. The Ridgeway and the Upper Thames are of regional, if not national, importance and opportunities to increase links between them will be encouraged and supported.

6.243 For this theme our strategy is based on –

- Working with partners to implement the Green Infrastructure Strategy

### **Promoting good health through active travel.**

6.244 Good health is important to quality of life. Physically active lifestyles are important to health. Active travel such as walking and cycling are a good way to improve health as they build exercise into everyday activities. This topic is covered in the section on the DaSTS Goal, "Contribute to Better Safety, Security and Health".

6.245 For this theme our strategy is based on –

- Working with Health partners on cross sector promotion of active travel initiatives.
- Improvements to the cycling and walking infrastructure
- Work on School Travel Plans and Workplace Travel Plans to promote the health benefits of alternatives to car travel.

Indicators that can be related to quality of life are

Average journey time per mile during the morning peak  
 Access to services and facilities by public transport, walking and cycling  
 Bus services running on time  
 Per capita reductions in CO2 emissions in the local authority area  
 Children travelling to school – mode of travel usually used

Progress in these areas can be an indication of maintaining or improving “quality of life”.

**Cross reference to other policies and strategies**

LTP3 Supplementary Document - Smarter Choices

Green Infrastructure Strategy

Sustainable Modes of Travel to School Strategy 2010

Transport Asset Management Plan

Network Management Plan

## 7 Option generation, appraisal and selection

*This chapter takes forward the transport related problems and issues that were identified in Chapter 4 and relates them to the national and local policy framework. It identifies options for addressing these key challenges and delivering the policy objectives. Options are sifted and appraised using the INTRA-SIM decision support tool.*

### Key Challenges

7.1 Option generation, appraisal and selection for Swindon's LTP3 has been taken forward through the Swindon DaSTS Study (mentioned earlier).

7.2 Swindon's transport-related problems and issues have been considered in the context of the DaSTS goals. Following on from this these problems and issues have been consolidated into a single set of key challenges for transport in Swindon. Six key challenges have been identified, as follows:

A – Optimising the operation of key strategic transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area;

B – Delivering transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner;

C – Contributing towards carbon reduction targets by achieving a shift to a more sustainable transport network;

D – Overcoming barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling;

E – Improving accessibility to/from the town centre, and ease of movement within it, to support regeneration of the town; and

F – Delivering transport solutions which are sympathetic to the local environment and do not adversely affect local quality of life.

7.3 These key challenges have been considered in terms of their compatibility with the DaSTS goals, with the strongest linkages shown in Table 2.1. The following text provides more detail on the context of the key challenges for Swindon. The context will be considered further in the assessment of options and refinement of scenarios.

Table 7.1: Compatibility between DaSTS goals and Key Challenges

<i>DaSTS Goals</i>	Support economic competitiveness & growth	Tackling climate change	Better safety, security & health	Promote greater equality of opportunity	Improve quality of life
<i>Key Challenges</i>					
A – Optimising transport corridors	●				
B – Delivering environmentally sustainable development	●	●	●		
C – Contributing towards carbon reduction targets		●	●		●
D – Overcoming barriers and severance		●	●	●	●
E – Improving accessibility to/from the town centre	●			●	
F – Transport solutions sympathetic to the local environment			●		●

*A – Optimising the operation of key strategic transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area.*

7.4 Swindon has the potential to continue to be a key regional economic driver. This opportunity has arisen due to existing and historical communication linkages provided by road and rail, and well-established industries in the area. However, significant housing growth in the town has still exceeded investment in infrastructure in recent years. In spite of considerable recent investment on the strategic road network in the form of the Commonhead flyover and Blunsdon bypass on the A419, this has resulted in more unreliable and increasing journey times and over-capacity junctions in many areas within the town. Accessibility, particularly to the town centre, is suffering as a result.

7.5 The quality and reliability of key transport corridors, including the M4, A419 and the Great Western Main Line, needs to be maintained and improved in order to move both people and freight into, within and through the area. The efficient and reliable movement of people and freight is essential if success is to be achieved in the area.

7.6 Optimising the operation of the local network is critical if the objectives of the town are to be achieved, particularly with regards to the regeneration of the town centre. Access to the town centre needs to be attractive in order to reverse the trend of people travelling outside Swindon for key services, shopping and employment.

*B – Delivering transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner*

7.7 The scale of growth envisaged for Swindon, combined with the existing problems and issues identified on the transport network, means that the need to travel should be reduced and as much of the potential travel demand as possible is encouraged to use sustainable modes. The locational decisions for new housing and employment sites will be the main driver in determining the approaches adopted.

7.8 It is of paramount importance that the economy in Swindon is given the opportunity to grow and strengthen, and the infrastructure is available to support this. However, the transport network needs to help facilitate this growth without compromising either economic success or the local environment.

7.9 Urban design and master-planning could also have a significant impact on how people choose to travel. Local design could help improve accessibility to local facilities, thus reducing the need to travel distances which are longer than necessary to access local services. Providing housing and employment in close proximity to one another could also increase the use of sustainable modes.

*C – Contributing towards local and national carbon reduction targets by achieving a shift to a more sustainable transport network*

7.10 A key way to contribute towards reducing carbon emissions is to make the local transport network function as efficiently as possible. Swindon is a well-defined primarily urban area. As such, the opportunity to use walking, cycling and public transport to access local services and facilities should be promoted.

7.11 Careful planning of new developments could contribute towards achieving this by encouraging more local trips, especially by sustainable modes. This could include consideration of urban design and master-planning, as well as the permeability of walking and cycling routes and the directness of public transport services in reducing the need for car trips.

7.12 Furthermore, the regeneration of the town centre could also increase its attractiveness and, as a result, this could encourage more local trips into the town centre which currently travel to other places. This in turn is more suited to use of sustainable modes, and the opportunity to travel by sustainable modes for such journeys should be promoted.

*D – Overcoming barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling*

7.13 Swindon is a well-defined urban area. Walking and cycling are used to access destinations across the town. However, there are barriers which prevent more trips being made in this way, some of which are physical. For example, the railway line inhibits movement between the north and south of the town in the town centre. With further expansion planned, it is likely that

more barriers will be identified (such as the A419 separating the town centre and Eastern Development Area). It is recognised that these barriers exist; however in order to promote the use of sustainable modes of travel, and maximise the benefits that could be realised, these barriers will need to be overcome.

7.14 Not all barriers are physical. People may choose not to walk and cycle for safety and security reasons. The design of infrastructure and housing developments will have an impact on the perception of walking and cycling in Swindon. Ensuring that new development sites are permeable could further encourage the use of walking and cycling, which would bring about benefits to health, the local environment and carbon emissions.

*E – Improving accessibility to and from the town centre, and ease of movement within it, to support the regeneration of the town*

7.15 It is recognised that not everyone has the opportunity to travel by private car. To promote equality of opportunity, it is necessary to consider how these people can access services and the town centre. This is particularly important from areas of deprivation.

7.16 As part of the regeneration of the town centre, the movement of people into and within the town centre by sustainable modes is of paramount importance. The movement of people needs to be managed to ensure that opportunities are maximised.

*F – Delivering transport solutions which are sympathetic to the local environment and do not adversely affect local quality of life*

7.17 Continued expansion of housing and employment within Swindon will have a detrimental impact on the environment unless measures are taken to address the demand for travel through sensitive areas. This applies to existing and new infrastructure. Any new infrastructure should have local environmental issues taken on board in its design. Furthermore, the risk associated with climate change should be considered and minimised through design.

7.18 There is a need to consider quality of life of both transport and non-transport users. For transport users, this could relate to journey comfort and reliability of journey times. However, traffic levels impact on both noise and air pollution, which can have a detrimental impact on both users and non-users. Re-design of local streets could bring about positive impacts for the community as well as transport users and should be linked to wider thinking on urban design.

## **Meeting the Challenges**

7.19 There are many possible ways to address the transport related problems and issues that have been identified in Swindon, and ultimately

contribute towards the delivery of the DaSTS goals, the wider local goals and objectives and the consolidated set of key transport challenges.

7.20 The following section sets out the methodology adopted for option generation. A wide variety of options are considered, with nothing ruled in or ruled out. During the scenario development and testing stage of work the options are initially appraised. This includes consideration of deliverability and affordability, alongside the key challenges and DaSTS goals. The key challenges ultimately influence the identification of preferred scenarios to be taken forward.

#### Option Identification and Assessment

7.21 A 'long list' of options has been developed to meet the wider DaSTS goals and the key challenges identified for Swindon. Overall, throughout option development and assessment, the key over-arching requirements are that options themselves should:

- Encourage sustainable travel;
- Minimise the level of carbon emissions; and
- Be deliverable within the likely available resources.

7.22 The objective is to generate options to resolve the problems and challenges identified for Swindon. In outline, the process for developing options looks at previously identified schemes and measures and adds to these (where appropriate), looking at initiatives that are reflective of the DaSTS goals, which may differ from the objectives that underlay identification of previous initiatives.

7.23 The DaSTS framework means that proposals for managing travel demand and making best use of the transport system should specifically be included, and there is work especially to consider those that maximise the performance of the strategic national corridor and the local network within the area and its hinterland. The roles that smarter choices initiatives and other sustainable transport measures can play are of particular importance. Allied to this, identifying scope for reducing the need to travel and promoting sustainable choices within the locational decisions on new housing and employment sites should be considered, and in particular to support regeneration initiatives in Swindon town centre.

#### Approach to Option Generation and Assessment

7.24 The overall approach to option generation and initial sifting is based on the overall requirements for analysis and appraisal suggested in guidance issued to date by the Department for Transport.

7.25 In outline, the approach taken has considered options generated by other studies and extensive liaison with Swindon Borough Council staff, cutting across the full range of responsibilities for transport and related issues.

A series of workshops have developed options, and crucially also begun the sifting process to deal with the 'long list' of options identified.

7.26 A notable source of specific options has been the Swindon Transport Strategy. This study also provides inputs in the form of public consultation responses. A variety of other recent studies have also been considered.

## **INTRA-SIM**

7.27 A key element of the initial sifting of options is the INTRA-SIM decision support tool that has been developed for Swindon. The ethos of the INTRA-SIM tool is that it quickly simulates the strategic choices available, allowing many different types of intervention to be assessed using a common framework of indicators that provide assessment of the impact of initiatives on the local and strategic environment, economy, safety and accessibility. As a multi-criteria assessment tool, outputs from INTRA-SIM can be used in more or less any appraisal framework.

## **Policy Packages**

7.28 A particular feature of INTRA-SIM is that it is aimed at assessing scenarios incorporating multiple initiatives across the broad spectrum of interventions. In order to do this in a practical and coherent manner, individual initiatives are grouped together based on the main thrust of the initiatives in question. These groupings are referred to as 'policy packages'. Between them, the policy packages cover all aspects of transport-related interventions, and can address all elements of the study objectives, key challenges and the DaSTS goals.

7.29 Sixteen policy packages are included in Swindon's INTRA-SIM. These are:

PP1: Rail	PP9: Park & Ride
PP2: Bus	PP10: Land Use Planning
PP3: Walk	PP11: Behavioural Change
PP4: Cycle	PP12: Low Emission Vehicles
PP5: Highway Infrastructure	PP13: Alternative Fuels
PP6: Traffic Demand Management (including pricing)	PP14: Slower Speeds & Ecological Driving
PP7: Maintenance & Safety	PP15: Freight
PP8: Parking Management	PP16: Long-distance Travel Substitution

7.30 The policy packages included in Swindon's INTRA-SIM were identified to encompass all possible interventions, amending a framework of policy packages initially derived in previous applications of INTRA-SIM. Changes were made to the packages to reflect priorities in Swindon.

7.31 It is imperative that the options generated address the challenges identified earlier, as well as the DaSTS goals. Table 7.2 illustrates where the particular strengths of each Policy Package interact and link with the DaSTS goals and key challenges. These linkages are taken forward into the next stage – scenario testing.

7.32 Each policy package in the INTRA-SIM decision support tool has three ‘levels’ of application (low, medium & high), which are assessed against a base fourth level (business as usual: BAU). The impacts of the various policy packages are projected to 2026, for each level of application as follows:

7.33 Business as usual (BAU) – is the ‘base’ against which all comparisons are made in INTRA-SIM. It is important to note that the ‘BAU’ is not the same as a conventional ‘do minimum’ as it essentially includes only the current transport network and committed changes for which definite funding is already secured. In effect, the only additional elements in addition to the existing situation relate to the Southern Development Area (Wichelstowe), where road links and bus services will come to fruition as development triggers are reached;

Low – is the first level of enhancement. This typically includes remaining LTP2 programme elements to 2011, though many schemes are likely to continue into LTP3. The likely level of funding and risk of implementation of elements is the lowest of the three levels;

Medium – generally includes potential LTP3 initiatives, both the initial 5-year programme and likely longer term strategic plan. Options included in this level are typically more complex and expensive than the ‘low’ level, and could be more tricky to implement; and

High – this level represents the most complex (albeit realistic) options, and generally stretches the limits of LTP3 with more radical thinking. As such, it includes some schemes that are perhaps unlikely to obtain funding in the current political or policy context.

7.34 Within each policy package, the levels of application build from one to the other; for example ‘Medium’ includes all schemes in the ‘Low’ level of application. As a result, the levels of application generally correspond to perceived intensity of investment in each particular policy package.

7.35 In assessing the sorts of schemes and interventions that represent the different levels of application, broad acceptability and deliverability is also a factor that is considered. For instance, this can determine whether an option is deliverable to a particular timescale.

**Table 7.2: Cross-referencing challenges and policy packages – the strongest linkages**

<i>Policy Package</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rail	Bus	Walk	Cycle	Highway Infrastructure	Traffic Demand Management	Maintenance & Safety	Parking Management	Park and Ride	Land-use Planning	Behavioural Change	Low Emission Vehicles	Alternative Fuels	Slower Speeds, etc	Freight	Long-dist Travel Substitution
<i>Goals, Objectives &amp; Challenges</i>																
<b>DaSTS GOALS</b>																
Support economic competitiveness and growth	•	•			•			•		•					•	•
Tackling climate change	•	•	•	•		•			•	•	•	•	•	•	•	•
Better safety, security & health and longer life expectancy			•	•			•				•			•		
Promote greater equality of opportunity for all citizens		•					•				•					
Improve quality of life			•	•		•				•	•	•	•	•		
<b>KEY CHALLENGES</b>																
A – Optimising the operation of key strategic transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area	•	•			•	•	•	•	•		•				•	•
B – Delivering transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner		•	•	•	•	•					•					
C – Contributing towards carbon reduction targets by achieving a shift to a more sustainable transport network	•	•	•	•							•	•	•	•	•	•

**Table 7.2: Cross-referencing challenges and policy packages – the strongest linkages**

<i>Policy Package</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Goals, Objectives &amp; Challenges</i>	Rail	Bus	Walk	Cycle	Highway Infrastructure	Traffic Demand Management	Maintenance & Safety	Parking Management	Park and Ride	Land-use Planning	Behavioural Change	Low Emission Vehicles	Alternative Fuels	Slower Speeds, etc	Freight	Long-dist Travel Substitution
D – Overcoming barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling			●	●			●			●						
E – Improving accessibility to/from the town centre, and ease of movement within, to support regeneration of the town centre		●	●	●				●	●	●						
F – Delivering transport solutions which are sympathetic to the local environment and do not adversely affect local quality of life	●	●	●	●								●	●	●		

## INTRA-SIM Indicators

7.36 A series of multi-criteria indicators are built-into Swindon's INTRA-SIM. The indicators cover the main goals for transport in the key categories of climate change, accessibility, economy, local environment and safety. The following multi-criteria indicators are included:

### Climate Change

Total CO2 emissions – by all modes

### Accessibility

Threshold measures – Households within 30 mins of the Town Centre

Households within 30 mins of the Hospital

Households within 30 mins of Workplaces

Hansen<sup>34</sup> measure of overall accessibility to the Town Centre

Hansen measure to the Hospital

Hansen measure to Workplaces

[Note that each accessibility indicator is expressed separately for all public transport, bus only, walk & cycle]

### Economy

Junction delay – highway junction delays in hours (AM and PM peak, 24hrs and annual)

Travel time on links – annual times in hours for car, LGV, HGV, rail, bus, cycling and walking

Accessibility to workplaces – households within 20 minute threshold and Hansen index measures (dual indicator: 'accessibility' and 'economy')

### Local Environment

Population/homes noise nuisance – people/households

Population/homes noise exceedance – people/households living within 20m of the road exposed to 68db(A) or higher road traffic noise level at the point of receipt

Population/homes perceiving road traffic vibration nuisance – people/households

Total emissions of (in kg) of Carbon Monoxide, Hydrocarbons, Oxides of Nitrogen, Particulate Matter, Benzene and 1.3 Butadiene

### Safety

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<sup>34</sup> Hansen measures of accessibility calculate an index of accessibility based on the journey time from origin points to destinations. These are aggregated across study areas to given an overall indicator index score. Where there are multiple destinations, the journey times to each place that can be accessed in the scope of the analysis is also included in calculation of the index.

Total road traffic personal injury accidents, PIAs, (observed Stats19 data, 2005-2009 projected to 2026)  
Total number of road traffic casualties: fatal, serious and slight

### **Options – the long list**

7.37 An important starting point in identifying options is to draw on the various technical notes and reports produced as part of developing the Swindon Transport Strategy. This study considered a large number of options, covering the short, medium and long terms. Although some options were subsequently rejected by the Swindon Transport Strategy, it is important to re-consider these, where appropriate, in light of the slightly different emphasis of the DaSTS goals and LTP objectives.

7.38 Some of the situations set out by the Swindon Transport Strategy have moved on since the study finished, in particular through joint working between the Highways Agency and Swindon Borough Council to continue to develop options for accessing the Eastern Development Area (EDA) as part of developing a Supplementary Planning Document (SPD). Detailed definition of options is on-going, but promising options identified will be taken into account.

7.39 Many options considered in the Swindon Transport Strategy are included in the policy packages. Conversely, there are some options deemed part of the policy packages that were not specifically identified in Swindon Transport Strategy documentation.

7.40 Table 9.3 sets out the long-list of options grouped into policy packages for assessment of scenarios using INTRA-SIM, including details of the low, medium and high levels of application.

### **Initial Sifting**

7.41 In allocating options to policy packages, use has been made of an initial sifting mechanism based on the type of appraisal that is likely to be required later in the process. The initial sifting process considers:

- Cost and value for money;
- Deliverability;
- DaSTS objective; and
- Key transport challenges in Swindon.

7.42 The sifting mechanism has been applied, in the first instance, to the policy packages as set out earlier. Table 9.3, which sets out the policy packages for assessment of scenarios using INTRA-SIM, also includes assessments of the policy package contents covering the overall risk, affordability and value for money, as well as deliverability and feasibility.

### **Individual Policy Package Assessments**

7.43 In the first instance, assessment of the individual policy packages has been undertaken based on INTRA-SIM. In order to undertake an initial assessment of the policy packages, five key indicators have been selected from the range available within INTRA-SIM, one representing each of the main indicator and objective categories of climate change, accessibility, economy, local environment and safety. The assessment of all policy packages will initially be based on the same indicators, though reference to other indicators will allow a broader view of each scenario to also be formed.

7.44 The indicators that have been selected to provide an overview of the likely impact of the policy packages are:

- Climate change – change in CO<sub>2</sub> emitted [tonnes];
- Accessibility – to workplaces by bus [Hansen accessibility index measure based on ability to get to one or more places]. Note that this indicator is limited in the current version of INTRA-SIM to bus-related options and the bus network;
- Economy – annual junction delay [hours];
- Local environment – population noise nuisance [Population living within 20m of the road exposed to 68db(A) or higher road traffic noise level at the point of receipt]; and
- Safety – Total road traffic personal injury accidents (PIAs) [casualties based on observed 2005-2009 Stats19 data projected to 2026].

7.45 These indicators enable an understanding to be gained about the contribution of the policy package towards the DaSTS goals.

7.46 The initial assessment has enabled a number of results to be extracted from INTRA-SIM. These show, from a central point of 'no impact', the extent of the likely contribution of the policy packages towards meeting the goals.

Brief summary impacts for each policy package are noted below:

- PP1 Rail – limited effect on the key indicators on its own, particularly at the low and medium levels when the changes forecast are very small.
- PP2 Bus – also has a limited effect on indicators in its own, although the amount of effect increases over the three levels accordingly.
- PP3 Walk – reasonably successful effect on the indicators, though their effect is most significant in areas where densities are greatest.
- PP4 Cycle – cycling policy packages have a similar impact to those related to walking, and indeed some could be common initiatives.
- PP5 Highway Infrastructure – have a mixed effect, with improvements to journey times, but at the expense of environmental indicators
- PP6 Traffic Demand Management – the quantum of effect on the key indicators is limited to trace changes that indicate small detrimental impacts.
- PP7 Maintenance & Safety – more efficient use of the road network is broadly beneficial, though some slight detriment in specific locations.

- PP8 Parking Management – limited individual effect on the indicators, though increasing from low to medium to high application.
- PP9 Park & Ride – beneficial environmental effects, though less positive on some others.
- PP10 Land-use Planning – all the key indicators exhibit positive changes, steadily increasing from low to medium to high levels of packages
- PP11 Behavioural Change – beneficial effects for all levels of application, increasing in magnitude of effect from low to medium to high.
- PP12 Low Emission Vehicles – environmental benefits are indicated.
- PP13 Alternative Fuels – environmental benefits are indicated.
- PP14 Slower Speeds and Ecological Driving – environmental benefits are indicated.
- PP15 Freight – successful outcomes in all the key indicators, with rising values from low to medium to high levels, though could be overstated.
- PP16 Long-distance Travel Substitution – small impact on the key indicators, with trace changes at all levels.

### **Initial Scenarios**

7.47 Following on from option identification, development of policy packages and initial sifting assessment, the next stage sees the policy packages grouped into scenarios (i.e. combinations of policy packages with different levels of implementation). In the first instance, a series of ‘initial’ scenarios have been developed, with the intention of addressing the six key challenges for transport in Swindon (as introduced earlier).

7.48 In discussing the option identification process, it has already been highlighted what would typically be regarded as the strongest links between the key challenges and the policy packages. Using these linkages, six initial scenarios have been identified (one for each challenge) in which a selection of policy packages have been combined in different ways to provide an initial assessment of how the key challenges might be addressed. The scenarios identified have been tested in INTRA-SIM, with the level of application for each policy package as ‘medium’. This enables the likely impact of each scenario to be assessed consistently against a series of indicators.

7.49 In addition to considering the initial scenarios through INTRA-SIM indicators, an initial wider assessment has also been undertaken, which includes:

- Cost (capital and revenue);
- Risk, affordability and value for money; and
- Deliverability and feasibility.

7.50 The wider assessment is indicative, providing high-level findings for each of the challenges. The assessment is also based on a medium level of intervention of all policy packages included in each scenario.

### **Scenario A – efficient and reliable movement**

7.51 Key Challenge – Optimising the operation of key strategic transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area

7.52 As this challenge is related to the efficient movement of people and goods for economic gain, policy packages have been identified that will help to better manage the existing transport network, with the aim of improving the movement of traffic and increasingly reliability. Furthermore, policy packages have been included that will provide more infrastructure (rail, bus and highway), hence increasing capacity on the network.

#### INTRA-SIM assessment

7.53 Overall, this scenario has a slight to moderate positive impact on the indicators in INTRA-SIM.

7.54 This scenario was developed to contribute towards achieving economic prosperity. The INTRA-SIM outputs suggest the scenario has a positive impact on the total car, LGV and HGV time spent on the network. That is, the time spent on the network by these modes is reduced.

7.55 However, the impact on junction delay is mixed. The scenario has a positive impact on junction delay in the AM peak, thus reducing delay for vehicles. Despite this, junction delay in the PM peak increases as a result of this scenario. This could be triggered by more vehicles on the network as a result of increased capacity. Nevertheless, to improve the economic prosperity of the area the junction delay on the network needs to be reduced. Hence, the indicators suggest that the scenario is not fully addressing the challenge.

7.56 In terms of bus accessibility, there is a notable improvement in the number of people who can access the town centre, hospital and workplaces within identified thresholds. This accessibility is likely to be as a result of bus priority measures and improved ticketing and information, including an extensive real time information network.

7.57 This scenario was not developed with a specific remit to reduce the impact on the local environment. However, the outputs suggest that this scenario has a slight positive impact on all local environmental indicators considered. The highway infrastructure policy package has a disbenefit on the environment due to increased trips on the network. Maintenance, behavioural change and freight have the most positive benefit. The positive impact of the freight policy package is as a result of greater efficiency and the provision of appropriate highway links to remove some trips from the network and increase the efficiency of the movement of goods.

7.58 There is a positive impact on all safety indicators with this scenario. This could be as a result of the reduced amount of vehicle time spent on the

network, as well as policies to implement more safety schemes. The freight policy also has a positive impact on casualty numbers. In contrast, investment in highway infrastructure has a negative impact on the number of casualties, as the number of vehicle trips on the network is likely to increase.

7.59 Generally, the policy packages which make the most significant contribution towards the challenge are behavioural change and freight. Maintenance and safety also results in improvements, with the exception of junction delay. While the scenario was developed to improve efficiency on the highway network, it makes a slight to moderate contribution towards this; however there are some aspects of the challenge which this scenario does not deliver against.

#### Wider Assessment

7.60 The estimated capital cost for implementing this scenario is likely to be over £50 million, with the revenue cost estimated to be in the region of £4 million and £8 million per annum. In addition to local and regional transport funding, sources of funding for this scenario, in particular some of the larger cost elements, would include the rail industry and developers.

7.61 No particular problems have been highlighted at this stage for schemes included in this scenario in terms of risk, affordability and value for money. Likewise, no significant issues have been identified related to the deliverability and feasibility of the schemes. Further assessment and investigation will be required to confirm this assessment.

#### **Scenario B – sustainable development**

7.62 Key Challenge – Delivering transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner

7.63 The policy packages identified are primarily focussed on promoting sustainable modes, and associated infrastructure that will encourage this. However, highway infrastructure is also included as the policy package identifies links between new development and the existing network.

#### INTRA-SIM assessment

7.64 This scenario has a positive impact on the INTRA-SIM indicators in each of the five categories. It has an overall positive impact on carbon reduction, although investment in highway infrastructure leads to an increase. Investment in walking, cycling and behavioural change has a more positive impact than the disbenefits associated with highway infrastructure.

7.65 The accessibility indicators suggest that this scenario has a positive impact by increasing the number of people within 30 minutes bus journey time of the town centre, hospital and workplaces. This is as a result of medium intervention in the bus policy package.

7.66 There is a slight to moderate positive impact on the economic indicators with this scenario. The focus on sustainable modes and behavioural change is likely to reduce the demand for highway trips on the network. The scenario has a positive impact on total time spent on the network by all modes and reducing junction delays. That is there is an increase in cycling and walking time but a decrease in the time spent on the network by all other modes. This suggests that the scenario is contributing positively towards the challenge.

7.67 The scenario has a slight positive impact on all local environment indicators. This is consistent with the findings that overall time spent on the network by modes which could have a negative impact on the environment is reduced. As with the economic indicators, the most significant benefits are realised with the walking, cycling and behavioural change policy packages.

7.68 This scenario has a focus on sustainability. However, it includes a medium level of intervention of highway infrastructure, as the policy package contains schemes to accommodate housing and employment growth on the network. In considering the individual contribution of packages towards this scenario, it is clear that the highway infrastructure policy package has a negative impact on carbon, noise and casualties. As such, if this policy package was not included in the scenario, the overall contribution towards addressing the identified challenge would be more significant.

7.69 In contributing towards this challenge, walking, cycling and behavioural change have the most significant positive impacts.

#### Wider Assessment

7.70 The second initial scenario has a lower capital cost, though still estimated at over £25 million. Revenue cost is estimated to be between £2 million and £5 million per annum. Funding sources are similar with potential for developer contributions in addition to local and regional transport funding.

7.71 Risk, affordability and value for money are not considered to be significant issues related to schemes included in this scenario. No potential issues have been identified to date related to the deliverability and feasibility of schemes in this scenario. Further investigation will be undertaken to ensure these assessments are appropriate.

#### **Scenario C – carbon reduction**

7.72 Key Challenge – Contributing towards carbon reduction targets by achieving a shift to a more sustainable transport network

7.73 The policy packages identified to address this challenge encourage the use of sustainable modes of travel or promote technologies which will reduce emissions from vehicles. Policies which influence travel behaviours are also included, which would help to reduce the need to travel. These

policies help to reduce carbon emissions from transport, as private vehicles have the most significant impact on emissions and these policies are promoting alternatives to private vehicle use.

#### INTRA-SIM assessment

7.74 This scenario includes a medium level of intervention of all policy packages which could have a positive impact on reducing carbon emissions from transport. The INTRA-SIM outputs show that the scenario has a significant impact on carbon reduction and on the local environment indicators. This impact is greater than recorded with other scenarios, indicating the benefits of combining similar policy package types.

7.75 The indicators suggest that a medium level of investment in encouraging slower speeds has a negative impact on carbon reduction. This apparently counteracts the benefits realised with investment in walk, cycle, low emission vehicles and freight, and to a lesser extent behaviour change and alternative fuels

7.76 A medium level of investment in bus has a positive impact on accessibility times to the town centre, hospital and work places by this mode. Investment in bus results in a slight reduction in junction delay. Similarly, the medium level rail policy package also results in a slight reduction in junction delay.

There are some positive economic impacts as a result of this scenario; however these are not as significant as with other scenarios. The PM peak delay at junctions is less with this scenario than with scenarios which include highway infrastructure. Investment in behavioural change, freight and long-distance travel substitution all impact on reducing junction delay, as well as investing in the more sustainable modes of travel. It should be noted that this scenario was not developed to contribute towards the economic indicators; hence this contribution is not critical for delivering this challenge.

7.77 The indicators suggest that this scenario makes a significant contribution towards the local environment indicators. The policy packages included in the scenario will all impact on increasing the attractiveness of more sustainable modes of travel. Behavioural change, slow speeds and freight all bring benefit to the local environment in terms of noise, vibration and air pollution. As such, this scenario contributes positively towards the identified challenge.

7.78 This scenario also results in improved road safety, as indicators suggest the number of injury accidents will reduce significantly. These benefits are realised by investing in walk, cycle, behavioural change and freight, with the most significant benefit from investing in interventions that will encourage slower speeds. As such, in developing a scenario with the aim of reducing carbon emissions, significant benefits are delivered towards other challenges.

7.79 No one policy package results in more significant positive impacts on the challenge than another. However walk, cycle, low emission vehicles and freight have the greatest contribution towards carbon reduction.

#### Wider Assessment

7.80 The capital cost for implementing this scenario is likely to be over £20 million. In addition, the revenue cost is estimated to be between £1 million and £3 million per annum. Again, local and regional transport funding sources could be supplemented, in particular some of the larger cost elements, though for this scenario could include rail industry contributions as well as developers.

7.81 In terms of risk, affordability and value for money, no issues have been raised to date with regards to schemes included in this scenario. Likewise, no potential issues have been identified related to deliverability and feasibility. However, further assessment and investigation will be required into the feasibility and deliverability of individual schemes.

#### **Scenario D – overcoming barriers and severance**

7.82 Key Challenge – Overcoming barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling

7.83 The policy packages with investment in the walk and cycle network are identified as the types of interventions that could help to overcome existing barriers and severance on the transport network. However, the role of non-transport solutions is also important to consider, such as the location of new developments or services.

#### INTRA-SIM assessment

7.84 This scenario, which includes the fewest policy packages of all scenarios considered, only has a slight impact on the INTRA-SIM indicators. The scenario does not include investment in bus; hence no contribution is shown on the accessibility indicators.

7.85 As with other scenarios, investment in walking and cycling brings about a reduction in carbon emissions as well as a positive contribution towards the local environment indicators. However, the impact is not as significant as with scenarios which include a wider variety of policy packages. Maintenance and safety also has a slight positive impact on reducing carbon emissions.

7.86 In terms of the economic indicators, some positive impacts are realised with this scenario however these are not as significant as identified with other scenarios. Of note, investment in land-use planning has the most notable positive impact on the economic indicators, more significant than

investing in walking and cycling combined. These positive impacts will contribute towards addressing this challenge.

7.87 The scenario includes investment in maintenance and safety. INTRA-SIM suggests that this scenario has a moderate impact on safety; however this is mainly realised through investment in walking and cycling. As such, maintenance and safety does not have a notable impact on contributing towards this challenge.

The INTRA-SIM outputs suggest that this scenario contributes most towards the challenge through investment in walking and cycling. Land-use planning has the most significant positive impact on reducing junction delay, although only has a negligible impact on other indicators.

#### Wider Assessment

7.88 The capital cost for implementing this scenario is high, likely to be over £150 million. The costs for this scenario are significantly higher than some of the other scenarios considered due to the high assumed cost related to land-use planning, though as a result a key source of funding for this scenario would be developers (in addition to local and regional transport funding). The revenue cost is estimated to be between £2 million and £4 million per annum.

7.89 Risk, affordability and value for money are not at present considered a particular issue for schemes and interventions included in this scenario. Likewise, no issues have been identified related to the deliverability and feasibility. Further assessment will be undertaken into individual schemes to confirm this as the study progresses.

#### **Scenario E – town centre focus**

7.90 Key Challenge – Improving accessibility to/from the town centre, and ease of movement within, to support the regeneration of the town

7.91 Policy packages promoting sustainable modes have been identified to improve accessibility into and through the town centre. Land-use planning has also been identified, as improved accessibility and regeneration can be promoted alongside each other. Parking management should encourage drivers into the town to use more sustainable modes of travel, hence reducing the number of vehicles on the highway network within and on the approaches to the town centre. Together with enhanced park and ride, this would create an opportunity to maximise the use of existing infrastructure for the benefit of sustainable modes.

#### INTRA-SIM assessment

7.92 This scenario has been developed with an emphasis on seeking to improve accessibility into and through the town centre. The investment results in a moderate impact on the indicators. In considering the specific

accessibility indicators, it should be noted that only bus accessibility to key destinations is explicitly included in the interim INTRA-SIM for Swindon, although this does, as expected, indicate significant improvement in bus accessibility to key destinations. Accessibility by other means (rail, walk and cycle) would be expected to improve, but is not currently reflected in indicators.

7.93 Policy packages in this scenario bring about moderate benefits in contributing towards the economic indicators. Investment in land-use planning makes the most significant contribution towards reducing junction delay.

7.94 Moderate local environmental benefits are realised with this scenario. These are primarily through investment in walking and cycling, which encourages the use of these modes as an alternative to private vehicles which have more negative impacts on the environment, including air quality, noise and vibration.

7.95 Investment in walking and cycling has a positive impact on carbon emissions, junction delay, local environment indicators and casualties. Investment in bus has a significant impact on improving accessibility. Parking and park and ride, providing alternative opportunities for people to travel to key destinations, have a negligible impact on carbon emissions, local environment and casualties.

7.96 However, due to limitations with the accessibility data, it is not possible to fully understand the contribution this scenario makes towards the challenge.

#### Wider Assessment

7.97 Capital costs of this scenario are estimated to be high, at over £130 million. Similarly to the previous scenario (D), this is as a result of the relatively high cost assumed in relation to land-use planning, though developer funding is again an important potential source for larger items, in addition to local and regional transport funding. The revenue cost is estimated to be between £2 million and £4 million per annum.

7.98 Further assessment and investigation into individual schemes will be required to confirm, but current assessments indicate no particular problems in terms of risk, affordability and value for money for schemes included in this scenario. Likewise, issues have not been identified related to scheme deliverability and feasibility.

#### **Scenario F – local environment**

7.99 Key Challenge – Delivering transport solutions which are sympathetic to the local environment and do not adversely affect local quality of life

7.100 Policy packages which encourage the use of non-car modes have been identified to address this challenge. However, consideration will need to be given to the design and construction of any new infrastructure to ensure it is sympathetic to the local environment. Policy packages which could help reduce vehicle emissions are also included, as it is recognised that local air quality can adversely impact on both the built and natural environment.

#### INTRA-SIM assessment

7.101 This scenario, which has been developed with the purpose of reducing the negative impact of transport on the local environment, has moderate impacts on the INTRA-SIM indicators. This is with the exception of the economic indicators, where the benefits are only slight.

7.102 This scenario has a positive impact on carbon reduction due to walk, cycle, low emission vehicles and alternative fuels. Investment in bus improves accessibility to the town centre, hospitals and work places. This is not impacted upon by any other policy package due to existing model imitations.

7.103 This scenario has a mixed impact on the economic indicators and the impact, when compared to other scenarios, is not notably better. The scenario only has a slight positive impact on the total time spent on the network by all modes. Junction delay is improved slightly by this scenario, primarily through investment in rail, bus, walk and cycle, which increases the attractiveness of alternative modes of travel.

7.104 The scenario results in a moderate improvement on many of the environmental indicators. A slight improvement is realised with this scenario on the total hydrocarbons, oxides of nitrogen and butadiene. The positive impacts on the local environment indicators with this scenario are realised through investment in walk, cycle and slower speeds and ecological driving. These policy packages also result in a positive impact on the safety indicators.

7.105 The indicators suggest that the scenario has a positive impact on contributing towards the challenge, but the wider impacts are not significant. Low emission vehicles and alternative fuels only have a contribution on carbon reduction.

#### Wider Assessment

7.106 The last of the 'initial' scenarios is estimated to require over £10 million in capital expenditure, with accompanying revenue costs estimated to be between £1 million and £2 million per annum. Similarly to scenario 'C' (carbon reduction focus), sources of funding for some of the larger cost elements could be the rail industry and developers, in addition to local and regional transport funding.

7.107 As with most of the initial scenarios, no significant risk, affordability and value for money issues have been identified to date that could affect the implementation of the scenario. Likewise, deliverability and feasibility have not been identified as a potential problem.

### **Summary of Findings**

7.108 The scenario identified to optimise the operation of key transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area (A) contributes towards the indicators in INTRA-SIM, but does not have a positive impact on junction delay in the PM peak. As such, the scenario does not maximise efficient movement on the network for economic prosperity, and hence does not deliver effectively against the challenge. Behavioural change and freight have the most notable positive impact on the INTRA-SIM indicators overall.

7.109 The scenario identified to deliver transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner (B) is contributed to primarily by walking, cycling and behavioural change. Traffic demand management has negligible impact. This scenario contributes towards the challenge and has wider benefits, such as a slight to moderate impact on the economic indicators.

7.110 The scenario identified to contribute towards carbon reduction targets by achieving a shift to a more sustainable transport network (C) has a more significant impact on carbon reduction and the local indicators compared to other scenarios. The policy packages with the most significant impact on reducing carbon are walk, cycle, low emission vehicles and freight.

7.111 The scenario identified to overcome barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling (D) only has a slight impact on the INTRA-SIM indicators. The main contributions towards the challenge are realised with the walking and cycling policy packages, with land-use planning contributing significantly towards reducing junction delay. This scenario has a significant cost associated with it, due to the inclusion of land-use planning. However, this cost is more likely to be borne by developers.

7.112 The scenario identified to improve accessibility to/from the town centre, and ease of movement within, to support the regeneration of the town (E) has a moderate impact on the INTRA-SIM indicators. Investment in bus, walk and cycle policy packages is likely to provide the biggest contribution towards this challenge. Again, the capital cost for implementing this scenario is higher than some of the other scenarios due to the inclusion of land-use planning as a policy package.

7.113 The scenario identified to deliver transport solutions which are sympathetic to the local environment and do not adversely affect local quality of life (F) makes a positive contribution towards the challenge, but the wider

benefits are not significant. The most significant environmental benefits are realised through investment in walking, cycling and slower speeds and ecological driving.

7.114 The assessment indicated that all scenarios would have a neutral or good rating in terms of cost, risk, affordability and deliverability. As such, no scenario has a significant advantage over another.

7.115 The findings suggest that, despite the scenarios contributing at least in part towards the key challenges, assessing the impact of different policy packages or differing levels of intervention could increase the level of contribution made towards meeting the challenges. This is investigated further in the following section, where the optimisation of scenarios is considered.

### **Scenario Optimisation**

7.116 There is value in taking the results from assessments of individual packages and initial scenarios to inform the construction of 'optimised' scenarios. These are scenarios which optimise the potential contribution that can be made towards meeting the challenges identified, as well as being realistic in terms of cost and deliverability.

7.117 It was decided to work with two scenarios. These are:

'Balanced' scenario – which seeks to optimise the benefits which can be achieved across all six of the key challenges; and  
'Economic' scenario – which seeks to maximise the degree to which the local economy and regeneration can be supported within Swindon, to reflect the importance of this issue within the town.

Each optimised strategy has been defined within two different budget limits, described as 'lower' and 'higher' cost levels.

#### **Defining the Optimised Scenarios**

Those policy packages performing best across all areas, and therefore supporting inclusion in the 'balanced' scenario, are:

PP3: Walk	PP12: Low Emission Vehicles
PP4: Cycle	PP13: Alternative Fuels
PP7: Maintenance & Safety	PP14: Slower Speeds & Ecological Driving
PP10: Land-use Planning	
PP11: Behavioural Change	PP15: Freight

7.118 From the results of initial assessments, those policy packages which perform best in meeting the challenge of supporting economic growth and regeneration in Swindon are:

PP1: Rail	PP10: Land-use Planning
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PP2: Bus  
 PP3: Walk  
 PP4: Cycle  
 PP8: Parking Management

PP11: Behavioural Change  
 PP15: Freight  
 PP16: Long-distance Travel Substitution

7.119 Table 7.3 illustrates the policy packages and levels included in the 'balanced' and 'economic' strategies, assuming two different budget limits for each (namely a 'low level' and 'high level' budget).

Table 7.3: Optimised Strategies – Policy Packages and Levels

Policy Package		BALANCED		ECONOMIC	
		High level	Low level	High level	Low level
1	Rail	BAU	<	Medium	Low
2	Bus	BAU	<	Medium	Low
3	Walk	Medium	<	Medium	<
4	Cycle	Medium	<	Medium	<
5	Highway Infrastructure	BAU	<	BAU	<
6	Traffic Demand Management (inc pricing)	BAU	<	BAU	<
7	Maintenance & Safety	Medium	Low	BAU	<
8	Parking	BAU	<	Medium	<
9	Park & Ride	BAU	<	BAU	<
10	Land Use Planning	Medium	<	Medium	<
11	Behavioural Change	Medium	<	Medium	<
12	Low Emissions Vehicles	Medium	<	BAU	<
13	Alternative Fuels	Medium	<	BAU	<
14	Slower Speeds & Ecological Driving	Medium	<	BAU	<
15	Freight	Medium	<	Medium	<
16	Long Distance Travel Substitution	BAU	<	Medium	Low

### Costs and Deliverability

7.120 There is considerable uncertainty over the availability and level of future funding for transport-related measures in the Swindon area in the years ahead. It is prudent, therefore, to consider interventions which lie within a range of best-estimate budget levels. For instance, the Swindon Transport Strategy estimated a funding requirement of £350m, of which approximately £125m would come from the public sector. Taking the broad estimates of the policy packages identified as part of this work, if all policy packages were applied together at the medium level of implementation, this would require around £84m of public sector expenditure.

7.121 The South West's DaSTS submission to the DfT in June 2009 identified a funding guideline for Swindon of £30m over the period 2014-19 (£44m if integrated block funding is included). The £30m figure for Swindon in the regional funding allocation (RFA) represents spend on a rapid transit system – with the whole of Phase 1 of developing the rapid transit network at £20m and a contribution of £10m to Phase 2. The remainder of Phase 2 (£90m) is anticipated to follow over the period 2019-26. The integrated transport block funding envisaged for Swindon over the same 2014-19 period

assumes £2.6m in 2014-15, rising to £2.8m by 2018-19, a total of some £14m.

7.122 Assessing how reduced future funding scenarios will affect Swindon's available transport funding is tricky given that the Comprehensive Spending Review is not until October 2010.

7.123 When considering the detail of what funding is available, there is merit in emphasising the role of incremental projects and small-scale interventions that have the potential to build-up to reduced funding levels, but provide widespread benefits, instead of several large-scale interventions that use the entire allocation between them. This is the approach that has been followed in developing the scenarios.

7.124 A key element will be the ability to mix and match policy packages and interventions to fit in with funding availability, especially in focusing on smaller and medium sized interventions in advance of larger schemes.

### **Capital Costs**

7.125 It has been assumed:

- All 'exceptional' costs are to be borne by external parties (e.g. town centre redevelopment costs and rail upgrading) and should not be influenced by general availability of funding;
- Revenue costs, which typically are significantly lower than capital costs for the range of interventions identified, have been ignored; and
- The 'high level' available budget is in the order of £30 million and the 'low level' available budget is in the order of £20 million, the majority of which would be spent in the period 2014-19.

7.126 The £30 million 'high level' budget is broadly consistent with a medium level of intervention across each one of the policy packages for both the 'balanced' and 'economic' scenarios. However, a reduced budget in the order of £20 million would require lower levels of investment in both. Table 7.4 shows the approximate costs of each policy package and highlights those where it is proposed to reduce investment to a lower level in order to meet budget limits.

Table 7.4: Optimised Strategies – approximate scenario costs

Policy Package		BALANCED		ECONOMIC	
		High level	Low level	High level	Low level
1	Rail	n/a		£9m	£3m
2	Bus	n/a		£8m	£3m
3	Walk	£1m	<	£1m	<
4	Cycle	£3m	<	£3m	<
5	Highway Infrastructure	n/a		n/a	
6	Traffic Demand Management (inc pricing)	n/a		n/a	
7	Maintenance & Safety	£18m	£4m	n/a	
8	Parking	n/a		£4m	<
9	Park & Ride	n/a		n/a	
10	Land Use Planning	Nil	<	Nil	<
11	Behavioural Change	£2m	<	£2m	<
12	Low Emissions Vehicles	Nil	<	n/a	
13	Alternative Fuels	Nil	<	n/a	
14	Slower Speeds & Ecological Driving	£1m	<	n/a	
15	Freight	£6m	<	£6m	<
16	Long Distance Travel Substitution	n/a		£4m	£1m
<i>Approximate Total</i>		<i>£31m</i>	<i>£17m</i>	<i>£37m</i>	<i>£23m</i>

7.127 A large proportion of the costs in the ‘balanced’ scenario are due to the maintenance and safety policy package. Consequently, this was the area identified where lower levels of spending would not compromise the overall structure of the scenario. A different approach was adopted for the ‘economic’ scenario where cuts across rail, bus and long distance travel substitution were made in order to reduce the high level costs to meet the lower budget.

### Revenue Costs

7.128 It is important to note that revenue funding has not been specifically included in the assessments to date. While, as noted, the amounts of revenue funding required are typically lower than capital funding, some of the interventions suggested are also dependant on revenue funding. For instance, the bus policy package would require over £0.5m in revenue funding per annum at the low level of implementation, rising to around £1.5m per annum at the medium level and over £3m at the high level of implementation. Sources of revenue funding for the bus packages could include developers, operators, various central government funds in addition to the Borough Council.

7.129 Other policy packages can be as dependent on revenue funding as capital, indeed even more so, although are generally financially less demanding overall. For example, behavioural change requires around £150k in capital but over £200k in revenue funding per annum at the low level of application. At the high level of application though, capital requirements rise to some £2.3m and revenue funding to around £800k. This policy package could also receive funding from a variety of partners.

### Initial Findings of Assessments

7.130 Details of the effects of the optimised strategies on the five key indicators identified previously and used to assess the initial scenarios, including the contribution of each policy package included in the scenarios, are discussed below.

### **'Balanced' scenario**

7.131 The impact of the low and high investment levels of the 'balanced' scenario has been assessed against the INTRA-SIM indicators. The scenario has a moderate to significant benefit on the majority of the INTRA-SIM indicators on which it has an impact. The scenario has a moderate benefit on annual time spent on the network by car, LGV, HGV, cycle and walk. A moderate benefit is also realised on junction delay, which is primarily a result of investment in land-use planning. The greatest benefit is seen in the AM peak.

7.132 A moderate to significant benefit is realised for the majority of the local environment indicators with both the low and high cost 'balanced' scenarios. The scenario has least benefit on total hydrocarbons and butadiene when compared to the benefit on the other indicators. All policy packages included in this scenario have a positive impact on these indicators.

7.133 The impact on casualties is moderate to significant. It is notable that the high cost option, which includes increased investment in maintenance and safety, does not have a significant additional benefit on casualties compared to the low level of intervention of this policy package. Indeed, the biggest contribution towards this indicator is by slower speeds and ecological driving. Walk, cycle and freight all make significant contributions towards these casualty indicators.

### **'Economic' scenario**

7.134 The impact of the low and high investment levels in the 'economic' scenario has been assessed using INTRA-SIM indicators. The scenario has a slight to moderate benefit on the majority of the INTRA-SIM indicators impacted upon.

7.135 It is notable that the low level of bus intervention (included in the low cost option) has a slight overall benefit on accessibility, compared to a moderate impact with the high cost option which includes a medium level of bus intervention. This indicates that a higher level of investment in bus will improve bus accessibility in the town.

7.136 The high cost option has a more notable benefit on overall junction delay than the low cost option. However, the low cost option still offers a moderate benefit, as land-use planning is included at a medium level of intervention in both options. The impact on annual car, LGV and HGV time is the same for high and low cost options. The low cost option has more benefit

to annual cycle time, though the same level of direct cycle intervention is applied in both.

7.137 The 'economic' scenario has a mixed impact on local environment indicators, from slight to moderate. Least benefit is provided to particulate matter with this scenario, with most benefit being noted for oxides of nitrogen and butadiene. Walk, cycle and freight offer the biggest benefits to these indicators. Both high and low cost scenario options have a moderate benefit on the number of casualties. The level of benefit is the same with the high and low cost options. Both high and low cost options include medium levels of walk, cycle, freight, along with land-use planning. These policies offer the most significant benefits when compared to the other components.

### **Summary of Findings**

7.138 There are a number of core policy packages which have an important role to play in the future of Swindon irrespective of which key challenges the town wishes to focus on. Specifically, both the 'balanced' and 'economic' scenarios show support for three distinct areas, namely:

- PP10 Land Use Planning;
- PP11 Behavioural Change with associated investment in walking and cycling; and
- PP15 Freight.

7.139 Land use planning seems particularly effective in supporting the economic growth of Swindon and supporting its regeneration. It does this by an increased concentration of development in the town centre and corresponding reduction in the remainder of the town. This approach favours the subsequent use of more sustainable forms of transport since residential and workplace activities are closer together, and it avoids some of the congestion which would otherwise occur on the highway network elsewhere in the town.

7.140 Behavioural change is also successful by encouraging some diversion from cars. Complementary investment in walk and cycle facilities improve the quality and security of those modes, reinforcing the shift to more sustainable travel. This helps reduce traffic levels and improve journey times on the network, alongside reducing carbon emissions, noise levels and accidents.

7.141 Investment in freight measures such as improved parking facilities and better links to and from the new development areas will also aid the economic performance of Swindon. Such measures will also have a positive effect on carbon emissions, noise nuisance and accident levels.

7.142 Turning to the additional component parts of the 'balanced' scenario, low emission vehicles and alternative fuels will be developed by the motor industry over the coming years. Although Swindon could act to bring such initiatives forward more quickly within the town, such policy packages

are essentially 'free of charge' for this analysis. Similarly, and although it will require clear leadership from within the Borough Council and from key stakeholders, the encouragement of slower speeds and more ecological driving is also low cost. A more significant level of expenditure is associated with maintenance and safety, particularly in clearing the backlog of highway maintenance schemes. This component of the 'balanced' strategy has the ability to be 'flexed' according to the available budget.

7.143 The 'economic' scenario suggests greater investment in rail and bus, including interchange between the two. Most of the measures which lie outside the responsibility of the rail industry are associated with aiding integration and the overall journey experience. Rail industry measures are also included, focusing primarily on service changes. The bus measures in particular have the potential to benefit a large number of travellers. Parking management also benefits the local economy where it is focussed on improving the accessibility of the town centre and reducing search times, amongst other things. Long distance travel substitution also aids the local economy, building on the opportunities for enhanced coach travel.

## **Conclusions**

7.144 It would appear that Swindon is best able to address its key transport-related challenges by focussing on the potential for its land use planning to reduce the severity of transport problems, encouraging more people to walk and cycle through an integrated approach to behavioural change, and dealing with the specific needs of the freight industry. Beyond this, the type of intervention most suited to Swindon will depend on the relative priority of the challenges to be addressed and the available budgets.

7.145 The analysis suggests that there are a number of core policies likely to have an important role to play in the future direction of transport strategy in Swindon, irrespective of which of the key challenges the town faces is the main focus. These are mostly interventions aimed at reducing the amount of travel demand, both in an overall sense and more specifically trips that use cars, including interventions such as land use planning and behavioural change (with associated investment in walking and cycling).

7.146 This is particularly well aligned with the overall Community Strategy goals for the transport system to contribute to the health, equality of opportunity and overall quality of life of the local community.

7.147 Taking the 'balanced' approach, where all the key challenges are addressed with a broadly even priority, the sorts of interventions that the analysis to date suggests as appropriate to include with the core policy packages are those that concentrate on environmental effects (particularly of road vehicles). As such, low emission vehicles, alternative fuels and encouragement of slower speeds & more ecological driving are all encouraged. These interventions also have the benefit of being effectively available at no cost to Swindon Borough Council. The other important element of a balanced approach is maintenance and safety, particularly in clearing the

backlog, though as a more costly option, the level of implementation may need to be set according to available budgets.

7.148 Alternatively, taking an approach that focuses on economic issues suggests greater investment in rail and bus, as well as interchange between the two, in addition to the core policy packages. Parking interventions also benefit the local economy. Again, rail and bus interventions have the potential to be costly, so their implementation depends ultimately on budgetary availability.

7.149 The key challenges identified will not be addressed through transport interventions alone. Hence, non-transport interventions will also be required, though these still need to align with wider transport, economic development, environmental, social and land use strategies. For example, urban design and master-planning can contribute to the use of sustainable modes of transport by creating permeable settlements, providing services locally and making pedestrian and cycle routes safe and attractive. Transport investment will not be able to achieve this on its own. In generating options, consideration was given to deliverability and relationships with non-transport solutions to ensure that any opportunities to address key challenges are maximised.

7.150 Phasing of implementing interventions will be important to achieve the maximum effect for the minimum outlay, especially within likely funding constraints. In effect therefore, in the early years, efforts should be made to implement (typically) low-cost high-value interventions, with greater emphasis on higher cost interventions as time progresses.

7.151 For instance, of the policy packages that show the greatest promise in the analysis so far undertaken using the interim INTRA-SIM model, behavioural change with associated investment in walking and cycling includes a number of opportunities to implement comparatively low cost and high value interventions. However, land use planning, while not necessarily requiring significant public sector investment, is dependant on significant private sector contributions, which are also subject to economic pressures as the wider economy is slowly recovering from recession.

7.152 Other policy packages that could also be pursued include those for which the Borough Council has little or no funding responsibility, but can have an effect through lobbying and promotional activities, such as low emission vehicles and alternative fuels. Policy packages such as bus and rail interventions are more capital and revenue intensive, except at the lowest levels.

## 8 The Final Strategy

*This chapter arrives at the final preferred strategy as a result of the use of the INTRASIM decision support tool in the context of the Strategic Environmental Assessments, Diversity Impact Assessment and Health Impact Assessment. The preferred strategy is also considered in the light of emerging and developing priorities for Swindon and the results of the consultation on the draft LTP in autumn 2010.*

### Finalising the DaSTS Preferred Scenario

8.1 The DaSTS Swindon Transport Study carried out a series of analyses in which policy packages and scenarios were assessed through INTRA-SIM. This resulted in the derivation of 'balanced' and 'economic' optimised strategies. To arrive at a final Preferred Scenario further testing, principally using INTRA-SIM, has been undertaken. This considered:

Scenario Composition – the interaction of policy packages and levels, and extent to which the level of policy package intervention (low, medium and high) influences the composition of the best-performing scenarios; and

Backcasting – considers the extent to which policy packages will have to be implemented to achieve defined targets for CO2 emissions and junction delay through a variety of different approaches.

8.2 Work has also progressed in developing some of the strongest performing policy packages which were likely to be part of the LTP3 Strategy. This has focused on assessments in two particular areas, namely:

Land Use – detailed consideration of this policy package, identified as a key element of any preferred strategy; and

Behavioural Change – assessment of another key element of any preferred strategy (with complementary walking and cycling measures).

### Scenario Composition

8.3 Taking the optimised scenarios as a starting point, INTRA-SIM testing has looked at the level of implementation of each policy package (high/medium/low/business as usual), identifying whether the levels suggested previously should be maintained, increased or reduced. This begins to unpick the policy packages, to ungroup interventions as appropriate and lead to derivation of the Emerging Preferred Strategy. The results are summarised below.

PP1 – Rail

8.4 This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, with the

benefits associated with this policy package only being significant at the 'high' level. However, some rail initiatives are the responsibility of the rail industry to develop and fund and can be supported by the strategy on the basis that Swindon Borough Council involvement is limited to in-principle support and lobbying. Rail initiatives specific to Swindon, such as light rail, are not supported.

#### PP2 – Bus

8.5 The bus policy package was partly supported by analysis through INTRA-SIM and the initial appraisal of costs and deliverability, although was only in the 'economic' optimised scenario (and not 'balanced'). Whilst further analysis has shown that general investment in buses does not necessarily provide good value, there are a number of specific interventions (for example, upgrades to traffic signals in order to facilitate bus priority) which are very strongly linked to initiatives in other policy packages. These should be supported by the strategy.

#### PP3 – Walk

8.6 Walking as a policy package is very well supported by analysis in INTRA-SIM and the wider initial assessment of costs and deliverability. It was included in both the 'economic' and 'balanced' optimised scenarios in conjunction with behavioural change and cycling measures. Walking measures provide greatest value at the medium level. Increasing to the high level is not considered appropriate, as the additional cost does not result in significant increases in benefits.

#### PP4 – Cycle

8.7 Cycling is also very well supported by the INTRA-SIM analyses. Similarly to walking measures, cycling measures interact well with behavioural change and as such was included in both the 'economic' and 'balanced' optimised scenarios. Cycling also performs best at the medium level, with the additional cost at the high level not resulting in a significant increase in benefits, and a lower level of investment losing many of the benefits which the medium level provides.

#### PP5 – Highway infrastructure

8.8 Highway infrastructure is not well supported as an overall policy package by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability. Adding the complete highway policy package to the strategy reduces the benefits in some indicators, notably CO2 emissions. However, new highway infrastructure provides a key role in serving new development areas. In addition, improvements to the management of highway infrastructure, such as UTMC, can be supported, particularly through development contributions, especially where this would assist the highway network in facilitating public transport enhancements such as developing future rapid transit proposals.

#### PP6 – Traffic demand management

8.9 This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, with the

benefits only being manifest in any significance at the high level, and are adjudged to be substantially related to pricing. However, elements of this policy package relating to development of the UTMC system should be developed, particularly in conjunction with maintenance and safety, as well as selected bus priority measures and ultimately taking steps towards developing potential future rapid transit proposals.

#### PP7 – Maintenance and safety

8.10 The maintenance and safety policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (not 'economic'). It should be included at the low/medium level since increasing to high does not provide a significant increase in benefits for a step rise in cost. The ultimate level of application will be dependant on cost, as the 'medium' level is significantly more costly than 'low'. As such, safety related measures should be prioritised if necessary.

#### PP8 – Parking

8.11 This policy package is supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'economic' optimised scenario (not 'balanced'). Closer examination of the effects of this policy package on the indicators indicates that the benefits realised are small. Some specific initiatives are still supported, for example linkages to UTMC and ITS, as well as controlled parking zones.

#### PP9 – Park & Ride

8.12 Park & Ride is not well supported by analysis through INTRA-SIM, and the wider initial appraisal of costs and deliverability, except at the highest level of application where its benefits are manifest. However, Park & Ride in Swindon is something that needs to be determined in a study of future development (or otherwise) of Park & Ride sites, to understand the role it can play in the town, particularly in conjunction with new development areas and other public transport services and hubs.

#### PP10 – Land use planning

8.13 The use of land use planning as a policy lever for transport is a very well supported policy package in analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability. Land use planning has been considered in detail, identifying the practicalities of implementing the initiatives suggested in the land use policy package, and recommending a way forward. This is summarised later in this chapter. Subject to the practicalities of the approach, land use can be described as medium/high in the strategy.

#### PP11 – Behavioural change

8.14 Behavioural change is also very well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and was previously considered an important part of any future strategy, in particular in conjunction with walking and cycling. Analyses show that increasing the application to high level provides good additional benefits for limited cost.

More information on the recommended approach to providing behavioural change is given later in this chapter.

PP12 (low emissions vehicles) & PP13 (alternative fuels)

8.15 The low emissions vehicles and alternative fuels policy packages are both reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability. Both were originally part of the 'balanced' optimised scenario, though not the 'economic'. Benefits from these policy packages increase with level of application to high. It should be noted that little expenditure is the direct responsibility of Swindon Borough Council for either of these policies.

PP14 – Slower speeds & ecological driving

8.16 Slower speeds are also well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario and not 'economic' as impacts are environmentally focused. The level of application is suggested as similar to low emissions vehicles and alternative fuels as primarily requiring in-principle support. There are some elements that could incur expenditure for Swindon Borough Council (such as speed limit setting and education programmes).

PP15 – Freight

8.17 The freight policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (and not 'economic'). The benefits at medium and higher levels are considered limited compared to the higher expenditure, so freight provides best value at the low level without an equivalent loss of benefit. Specific interventions are supported in-principle, such as greater use of the rail freight yard at South Marston and a potential urban freight consolidation centre.

PP16 – Long distance travel substitution

8.18 This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability. Its application does not imply significant benefits unless at the high level. However, some specific elements could be incorporated, particularly if linked to coach or rail industry initiatives that are controlled and funded outside Swindon Borough Council.

## **Backcasting**

8.19 The technique of 'backcasting' establishes the extent to which potential targets could be met through a variety of different approaches. This includes testing combinations of policy packages at different levels of intervention, as well as determining some appropriate future values to consider as targets.

8.20 The DaSTS Study analyses focused on CO2 emissions and junction delays, looking in more depth at how policy packages affect these

indicators, as assessed within INTRA-SIM. These indicators have been chosen because they represent two key issues for transport. Moreover, various measures and specific targets exist for CO<sub>2</sub> emissions through climate change legislation, albeit these are not specifically measured in Swindon as an area.

## **CO<sub>2</sub> Emissions**

8.21 Policy packages vary in the extent to which they can reduce CO<sub>2</sub> emissions. However, despite selecting those packages which have the greatest impact on reducing CO<sub>2</sub> emissions, the INTRA-SIM testing has shown that it is not possible to achieve the target reductions of CO<sub>2</sub> emissions suggested by the Kyoto treaty (50% reduction from 1990 levels by 2050).

8.22 It should be noted this is assuming that the reductions required to meet the target are proportional to the share of CO<sub>2</sub> emissions for transport in Swindon remaining broadly the same. In practice, reductions in other sectors, in particular power generation and domestic uses, may provide more than their 'fair share' and transport's contribution could be correspondingly slightly less overall. As such, a range of other (lower) targets were also assessed.

8.23 A key message from the INTRA-SIM testing is that infrastructure related policy packages can not readily achieve CO<sub>2</sub> emissions targets without some of the 'persuasion' policy packages also in place; for instance, only the lowest (an 11% target reduction from 2026 forecast values) can be achieved without behavioural change and/or low emissions vehicles. A 23% reduction target (returning to 2006 emissions) requires at least that behavioural change be at the medium level, as well as low emissions vehicles and alternative fuels, in addition to infrastructure measures. Higher targets need more emphasis on these non-infrastructure policy packages.

8.24 The analyses also show that concentrating on CO<sub>2</sub> emissions means that other indicators could be neglected. For instance, scenarios where infrastructure and services are included result in greater beneficial effect on accidents and accessibility (though still need other policy packages such as behavioural change as noted previously). Alternatively, while non-infrastructure policy packages can achieve moderate CO<sub>2</sub> emissions targets alone, they have no effect on accessibility and a much lesser effect on other indicators.

## **Junction Delays**

8.25 The potential targets set out for junction delays are based on the concept of reducing future delays to the current level, from a forecast of greatly increased delays with future development. As such, the maximum target set out is to reduce daily junction delays from the 2026 BAU level by 89%. This equates to reducing daily 2026 delays to 2006 base year levels. It should be noted though that testing of 2026 BAU network assumptions does not include any additional highway infrastructure or public transport above

minimum linkages to enable new developments to be included in the transport model and those that already have committed funding in place. Hence 2026 delays are a worst case scenario.

8.26 Notwithstanding this, in order to achieve this highest level of reduction, significant intervention is required across the policy packages available in INTRA-SIM. Two alternative approaches have been identified; one places most reliance on infrastructure and public transport services and the other on decision influence measures such as behavioural change. Using either approach, it is possible to meet the targets identified, including the 89% reduction to 2006 levels in 2026.

8.27 However, the approach focusing on infrastructure requires that all of these types of packages are at the high level, with the addition of parking, maintenance & safety and behavioural change at the medium levels. With behavioural change at the high level, they can be reduced to the medium level. It is particularly apposite to note that traffic demand management (PP7) is required at the high level in both options and that this policy package level includes road pricing. Without road pricing, therefore, it is not possible to reduce the forecast 'worst case' 2026 junction delay levels back to those of 2006.

8.28 A key message from this work is that behavioural change is a particularly important and powerful element in the strategy, particularly when allied to appropriate infrastructure improvements and targeted work at junctions, as well as through maintenance and safety schemes and UTMIC enhancements.

### **Land Use Planning**

8.29 The potential for land use planning to assist in meeting Swindon's transport challenges was clearly demonstrated during the DaSTS study. A specific task was therefore to investigate land-use approaches that would be considered achievable and capable of delivering the type and scale of benefits identified, but without compromising other growth aspirations. In doing this, it is recognised that there are some aspects that the Borough Council may not have influence over and could have some difficulty in achieving.

### **Town Centre**

8.30 The DaSTS Study analyses showed that increased densification of housing and employment is likely to bring numerous benefits in the town centre. These will partly be realised as the town centre acts as a public transport hub for bus and rail services, hence encouraging trips to be made into the town by these modes. The town centre also has a mix of housing and employment, as well as local services, providing the opportunity for short trips by walking and cycling. Reinforcing the existing land use pattern will support the delivery of the wider aspirations identified, particularly related to town centre regeneration, supporting economic growth and encouraging sustainable travel.

## **Urban Extensions**

8.31 The DaSTS Study work showed that, in order to maximise the benefits that can be gained from potential development sites and urban extensions, development should be mixed, with a balance of housing and employment. Permeability for walking and cycling through sites, as well as to neighbouring areas, will be critical to encourage their use. To encourage cross-town trips to use public transport, a hub should be provided on any new development site, as well as a high-quality public transport link to/from the town centre. This enables the delivery of wider aspirations, most notably contributing towards the achievement of sustainable economic growth, providing a sustainable transport system and developing sustainable communities.

## **Behavioural Change, Walking and Cycling**

8.32 The merit of behavioural change and associated investment in walking and cycling was clearly demonstrated during the DaSTS study, as these policy packages provide benefits in a cost effective manner. It showed that there is scope to increase the amount of walking and cycling in Swindon, which would benefit transport's contribution to wider goals. The research undertaken highlighted three key components to effect behavioural change:

- Infrastructure design;
- Land use planning; and
- Effective marketing campaigns.

8.33 An overall approach is recommended, bringing together these components, to develop low cost, good value initiatives and schemes.

## **Key Conclusions**

8.34 This further analysis has helped to:

- Clarify the extent to which different policy packages should be included in the Emerging Preferred Strategy;
- Illustrate the danger of concentrating on a narrow range of indicators in defining the Emerging Preferred Strategy;
- Confirm the importance of those policy packages providing low cost, sustainable travel, albeit allied to some specific infrastructure schemes;
- Reinforce the importance of land use planning in the town centre and in urban extensions to achieve transport-related objectives; and
- Identify a way in which behavioural change, walking and cycling could be promoted.

## **Emerging Preferred Strategy**

8.35 An Emerging Preferred Strategy has been defined which draws together the results from the DaSTA INTRA-SIM analysis.

8.36 In the first instance, ‘the backcasting’ analysis illustrated that focusing on the effects a scenario has on a single indicator or set of similar indicators can result in a skewed set of policy packages and interventions. As such, the starting point for the Emerging Preferred Strategy is the ‘balanced’ scenario as this has the broader aim of affecting indicators across the spectrum.

8.37 Hence, the basic framework of the Emerging Preferred Strategy is based on the policy packages in the ‘balanced’ scenario with adjustments made to policy packages and levels suggested by the scenario composition assessments discussed earlier in this chapter. That is, the scenario composition INTRA-SIM tests have identified policy packages that can be increased or decreased in level, either in whole or in part. Table 8.1 sets out the Emerging Preferred Strategy in terms of the policy packages.

Table 8.1: Emerging Preferred Strategy – policy packages & levels

<b>Policy Package</b>		<b>Levels</b>
<b>1</b>	Rail	Specific schemes
<b>2</b>	Bus	Specific schemes
<b>3</b>	Walk	Medium
<b>4</b>	Cycle	Medium
<b>5</b>	Highway Infrastructure	Specific schemes
<b>6</b>	Traffic Demand Management (including pricing)	Specific schemes
<b>7</b>	Maintenance & Safety	Low/Medium
<b>8</b>	Parking	Specific schemes
<b>9</b>	Park & Ride	Specific schemes
<b>10</b>	Land Use Planning	Medium/High
<b>11</b>	Behavioural Change	High
<b>12</b>	Low Emissions Vehicles	Medium/High
<b>13</b>	Alternative Fuels	Medium/High
<b>14</b>	Slower Speeds & Ecological Driving	Medium/High
<b>15</b>	Freight	Low
<b>16</b>	Long Distance Travel Substitution	Specific schemes

8.38 Additional to the low/medium/high policy packages included in the Emerging Preferred Strategy, a number of specific interventions from other policy packages are also included, and are shown as ‘specific schemes’ in Table 8.1.

8.39 As such, the Emerging Preferred Strategy can be defined as:

being “founded upon a comprehensive package of sustainable transport measures, reinforced and supported by a number of specific infrastructure schemes.”

### **Impact upon key challenges**

8.40 Table 7.2 illustrated the strongest linkages between the challenges and the 16 policy packages. Consideration has been given to the way in which the key challenges are addressed by the Emerging Preferred Strategy.

8.41 Firstly, it is important to note that the core focus on sustainable transport measures (walk, cycle, maintenance and safety, behavioural change, low emission vehicles, alternative fuels and slower speeds) addresses, in combination, every one of the six key challenges. Not surprisingly, those challenges concerned with issues of carbon, severance, accessibility and quality of life are particularly well represented.

8.42 Secondly, the specific infrastructure schemes included in the Emerging Preferred Strategy are focussed on improving the efficient movement of people and goods within Swindon, thereby reinforcing the modal change caused by the sustainable measures. Some infrastructure schemes will be directly linked to new growth areas, again complementing the sustainable interventions.

8.43 Taken together, the combined package of sustainable measures and specific infrastructure schemes addresses all six challenges in full. In so doing, it gives full support to Swindon's desire for future economic growth, yet does so within a framework which gives full cognisance to environmental and social considerations.

8.44 The way in which each key challenge is addressed by the Emerging Preferred Strategy is shown in Table 8.2.

Table 8.2: Emerging Preferred Strategy and the Key Challenges

Key Challenge	Linkages to Emerging Preferred Strategy
<p><b>A</b> Optimising the operation of key strategic transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area</p>	<ul style="list-style-type: none"> <li>• The strongest links suggested for this challenge are infrastructure based. Within the Emerging Preferred Strategy (EPS), infrastructure measures are limited, but are targeted to improve efficiency, with specific reference to economic development.</li> <li>• An important component of the EPS is behavioural change. The impact this has on indicators across the spectrum indicate that it has a strong effect on reducing inefficient use of networks.</li> </ul>
<p><b>B</b> Delivering transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner</p>	<ul style="list-style-type: none"> <li>• As noted for challenge ‘A’, infrastructure measures supported by the EPS are specifically targeted at new developments.</li> <li>• Implementation of behavioural change measures, along with walking and cycling measures, should encourage sustainable travel in new developments from the outset, as well as in existing areas within Swindon.</li> </ul>
<p><b>C</b> Contributing towards carbon reduction targets by achieving a shift to a more sustainable transport network</p>	<ul style="list-style-type: none"> <li>• Key policy packages that contribute to carbon reduction are behavioural change, low emissions vehicles and alternative fuels, which are significantly represented in the EPS.</li> <li>• Other policy packages that are particularly effective include walking and cycling and land use planning (which along with behavioural change seeks to reduce the need to travel and reduce CO<sub>2</sub> through patterns of development)</li> </ul>
<p><b>D</b> Overcoming barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling</p>	<ul style="list-style-type: none"> <li>• Walking and cycling measures are key elements of the EPS, and within this (as indicated for challenge ‘B’) ensuring new developments are created with sustainable travel behaviour from the outset is a key aim.</li> <li>• Specifically dealing with severance is encouraged through the walking and cycling policy packages, particularly working with other parties to make best use of available funding and potentially seek more.</li> </ul>
<p><b>E</b> Improving accessibility to/from the town centre, and ease of movement within it, to support regeneration of the town</p>	<ul style="list-style-type: none"> <li>• As noted for challenge ‘A’, infrastructure measures supported by the EPS are targeted at new developments, and town centre regeneration is paramount. The land use planning package suggests a focus on the centre the resulting provision of employment and facilities makes public transport more viable.</li> <li>• Continuing development of high quality public transport links to the centre (rapid transit) is specifically supported.</li> </ul>
<p><b>F</b> Delivering transport solutions which are</p>	<ul style="list-style-type: none"> <li>• A key determinant of quality of life is liveability in the urban realm, and a key element of the strategy is to</li> </ul>

Key Challenge	Linkages to Emerging Preferred Strategy
sympathetic to the local environment and do not adversely affect local quality of life	<p>enhance this in terms of the walking and cycling environment, as well as through maintenance and safety improvements.</p> <ul style="list-style-type: none"> <li>• The policy packages that perform well against CO<sub>2</sub> emissions also generally perform well in terms of the wider environment.</li> </ul>

## Reconciliation – Swindon Transport Strategy

8.45 The Swindon Transport Strategy, completed in May 2009, identified a strategy for transport in Swindon which included a significant number of potential transport interventions. It has subsequently become the de facto basis for developing the underlying strategy and interventions in the Local Transport Plan for Swindon (LTP3). Interventions identified in the Swindon Transport Strategy were considered in the DaSTS study, including some that were originally rejected by the Swindon Transport Strategy. Many of the interventions identified in the Swindon Transport Strategy have been incorporated into policy package assumptions used in developing Swindon’s INTRA-SIM, as appropriate for the policy package.

8.46 A key element of strategy reconciliation, therefore, is in assessing the composition of scenarios in comparison with the Swindon Transport Strategy in order to reconcile any differences that have resulted from a differing emphasis in approach to assessing the impact of interventions. This has drawn in particular on the findings of further INTRA-SIM testing that looked into scenario composition and ‘backcasting’, and in addition the more detailed analyses carried out to consider land use and behavioural change.

8.47 Interventions suggested by the Swindon Transport Strategy have been cross-referenced with the scenarios and strategies that have been identified and assessed to date as part of the DaSTS Swindon Transport Strategy Study. In doing so, the scenarios have been ‘un-picked’ as far as possible and specific elements of the Swindon Transport Strategy tested for inclusion in the developing strategy.

8.48 This comparison showed that almost all of the interventions identified in the Swindon Transport Strategy are included in some form in the Emerging Preferred Strategy, albeit that the timescales are in many cases different and/or there is a less specific role for the Borough Council in advancing proposals and a greater dependence on external funding from the private sector than was previously envisaged. The only areas where this does not apply are large scale highways schemes such as the Purton-Iffley link (between Great Western Way and Thamesdown Drive) and specific links to major developments. For the former, these are not supported by the strategy, reflecting a need to consider both the requirement for the road and realistic potential to get funding in the current and future climate. Access plans for new developments (such as the EDA) remain to be determined in detail but are supported in principle.

## Strategic Environmental Assessment

8.49 European and UK legislation require that the LTP3 is subject to a Strategic Environmental Assessment (SEA), a process that considers the effects of plans on the environment. Government guidance<sup>35</sup> outlines a number of stages of SEA work that need to be carried out as the LTP is being prepared:

- **Stage A:** Setting Context & Scope
- **Stage B:** Developing Options & Assessing Effects
- **Stage C:** Preparing the SA Report
- **Stage D:** Consulting on the Plan & the SA
- **Stage E:** Monitoring Implementation of the Plan

8.50 The SEA of Swindon's LTP3 has been prepared in accordance with this requirement for SA/SEA.

### SEA Method-Scoping

8.51 During early 2010 a scoping process was carried out to help ensure that the SEA covered key environmental issues relevant to Swindon Borough. This built on earlier SEA Scoping work that had been completed for Swindon's Transport Strategy in 2009<sup>36</sup>. Baseline and plan information collated for the SEA of the Transport Strategy was reviewed and updated. A new SEA scoping report for LTP3 was prepared that summarised the information and considered key problems and issues for 8 headline topics. The SEA Framework used for the Swindon Transport Strategy SEA was retained for consistency; however some alterations were made to ensure key issues were covered, and each objective was grouped into its relevant headline topic. This is provided in Table 8.3 below. The Scoping report was sent to statutory consultees for comment in June 2010, and the responses received have helped to inform the SEA and Environmental Report.

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<sup>35</sup> Department for Transport (2009) Strategic Environmental Assessment for Transport Plans and Programmes TAG Unit 2.11

<sup>36</sup> WSP (2008) Swindon Transport Strategy: Strategic Environmental Assessment Environmental Report

Table 8.3 **Headline topics and corresponding SEA objectives**

<b>Topic</b>	<b>SEA Objective</b>
<b>Air Quality</b>	8. Reduce environmental pollution including noise and air pollution
<b>Biodiversity and Soil</b>	1. Maintain and enhance biodiversity <u>and soils</u> and avoid irreversible losses
<b>Climatic Factors</b>	7. Reduce impacts on climate change through energy efficiency measures and promotion of renewable energy solutions and minimise the emissions of greenhouse gases.
<b>Landscape, Townscape and Cultural Heritage</b>	2. Use land and existing buildings efficiently and prioritise development on Previously Developed land 12. Provide a high quality built environment 14. Conserve and enhance the historic built environment and archaeological assets 15. Conserve and enhance rural and urban landscapes <u>and townscapes</u>
<b>Material Assets</b>	3. Promote sustainable waste management solutions
<b>Population and Health</b>	8. Reduce environmental pollution including noise and air pollution. 9. Reduce social exclusion and poverty 10. Provide decent and affordable housing for everyone 11. Provide a safe and healthy environment in which to live 13. Maintain the integrity and function of individual settlements 16. Promote a sustainable, diverse and vibrant sub-regional economy 17. Provide opportunities for a highly skilled and educated workforce 18. Enhance the image and role of Swindon's Central Area as a sub-regional centre and destination
<b>Transport and Accessibility</b>	6. Reduce the need to travel and promote more sustainable forms of transport
<b>Water</b>	4. Use and manage water resources in a sustainable manner 5. Protect people and property from the risk of flooding

## **Assessment**

8.52 Each stage of the preparation of the LTP3 was assessed using the SEA Objectives. Where possible, the SEA sought to identify opportunities for improvement and cumulative effects were also considered. The assessment recognised 7 categories of predicted effects, as illustrated in the following key.

Table 8.4 SEA Assessment Key

Symbol/colour:	Environmental Effect:
X	Absolute environmental constraints
--	Problematical and improbable because of known environmental issues
-	Potential environmental issues: mitigation and/or negotiation possible
+	No environmental constraints and policy/proposal acceptable
++	Policy/proposal encouraged as would resolve existing environmental problem
?	Uncertain or unknown Effects
0	Neutral effect

### Consideration of Alternatives

8.53 The SEA Directive requires consideration and assessment of the reasonable alternatives available to the plan maker when considering how the plan may be prepared. The following alternatives were considered:

1. The 'Business as usual' Scenario
2. The 'Balanced' Scenario
3. The 'Economic' Scenario
4. The 'Green Swindon' Scenario

8.54 The fourth 'Green Swindon' scenario was prepared at the request of Council's SEA consultants and expanded on the environmental benefits of scenario 2 and 3. Overall the SEA found that the Balanced, Economic and Green Swindon scenarios would all have the potential for a positive environmental effect, with the Green Swindon scenario preferred, followed by the Balanced and Economic scenarios.

### The Likely Significant Effects of the Plan

8.55 Swindon's LTP3 Strategy incorporates a selection of policy interventions that include improvements in walking, cycling, land-use planning, maintenance and safety, behavioural change, low emission vehicles, alternative fuels, slower speeds/ecological driving and freight.

8.56 The policy towards rail, bus, highway infrastructure, traffic demand management, parking and park and ride remains to adopt a business-as-usual approach, with no new specific schemes proposed in these areas. This approach (i.e. no new funding for public transport and road infrastructure) has been necessitated by the current uncertainties in the external funding environment.

8.57 As the plan is proposing minimal new development in itself, any effects on the environment are considered to be generally positive, with some areas of uncertainty remaining until further information is available in relation

to specific schemes. The following table summarises the results of the assessment by topic:

Table 8.5 Summary Assessment of LTP 3

Topic	Potential effect of LTP3
Air Quality	<ul style="list-style-type: none"> <li>• Short-term positive effects through initiatives that help to reduce the number of private vehicles and therefore minimise associated emissions. However, air quality in the Borough is likely to continue declining due to the significant predicted increase in population over the next 20 years.</li> <li>• Long-term negative effects as there is no substantial investment planned for bus and rail measures, therefore car use is likely to be further entrenched in the long-term.</li> </ul>
Biodiversity and Soils	<ul style="list-style-type: none"> <li>• Indirect minor positive effects through initiatives that help to reduce the number of private vehicles and therefore minimise associated emissions. However, in the longer-term, Swindon's expanding population is likely to result in an increased number of vehicles on the Borough's (and neighbouring authorities) roads.</li> </ul>
Climatic Factors	<ul style="list-style-type: none"> <li>• Short-term positive effects through initiatives that help to reduce the number of private vehicles and therefore minimise associated carbon emissions.</li> <li>• In the long-term, Swindon's expanding population will lead to increased car-use. Unless further funding can be found for a significant increase in bus and rail infrastructure and services, the longer term trend will be for CO<sub>2</sub> emissions to increase.</li> </ul>
Landscape, Townscape & Cultural Heritage	<ul style="list-style-type: none"> <li>• Positive effects through upgrading of existing infrastructure and improvements to the public realm.</li> <li>• In the longer term, an increase in traffic due to a rising population may lead to adverse effects on landscape, townscape and heritage.</li> </ul>
Material Assets	<ul style="list-style-type: none"> <li>• As the Strategy is not proposing any major infrastructure projects, use of aggregates and construction waste are considered to be minimal.</li> </ul>
Population & Health	<ul style="list-style-type: none"> <li>• Positive health effects through walking and cycling infrastructure improvements and reduced pollution, which will assist in promoting healthier and more active lifestyles and minimising the incidence of respiratory diseases.</li> <li>• A reduction in road vehicles in the short-medium term could also improve safety. Reduced noise and light pollution will also have benefits for quality of life and human health.</li> <li>• Positive effects on economy through minimising the need for residents to travel outside Swindon for specific services or facilities.</li> <li>• Positive and negative effects on social exclusion and equalities.</li> </ul>
Transport & Accessibility	<ul style="list-style-type: none"> <li>• Positive effects on accessibility through improved walking and cycling infrastructure and supporting re-development of the town centre.</li> <li>• LTP 3 will minimise the need for residents to use private vehicles to access services as alternative modes of transport will be available</li> <li>• Long-term positive effects on sustainable transport through</li> </ul>

	<p>supporting the transition to alternative fuels and encouraging the use of low emission vehicles and ecological driving.</p> <ul style="list-style-type: none"> <li>• In the longer-term, increased congestion in Swindon is likely, unless further measures are taken to improve public transport.</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Unlikely to have significant short-medium term effects, however specific schemes have potential to increase flood risk. Water quality may be an issue in longer term with increased traffic.</li> </ul>

### Recommendations and the difference the SEA process has made

8.58 The SEA process has been undertaken alongside the development of LTP3 and has helped to inform the preparation of the plan. One of the key recommendations has been to include the consideration of a more environmentally acceptable alternative, (Alternative 4- Green Swindon) in addition to the other alternatives under consideration. Elements of this alternative (in particular, a higher focus on behavioural change, low emissions vehicles and alternative fuels) have since been incorporated into the final strategy, improving the overall sustainability of LTP3.

8.59 Other recommendations relate to the implementation of LTP3 and future LTPs, and include the following:

- Where funding allows, a stronger focus on rail and bus schemes should be incorporated into the LTP3 implementation plan. Where possible, improvements should also be sought through Developer contributions. Of particular concern is the lack of funding for services to rural areas.
- Where possible, sustainable drainage measures should be incorporated into any infrastructure schemes, including walking and cycling measures.
- Any schemes for walking and cycling, and other infrastructure schemes, as appropriate, should be undertaken in accordance with Council's Green Infrastructure Strategy. Where possible opportunities for biodiversity and flood risk mitigation should be incorporated.
- Future schemes, including those proposed through developer contributions, should incorporate principles of design with climate change adaptation in mind.
- The Council's approach to parking should be reviewed in a few years time, and if the economic situation allows, it is recommended that a more stringent approach is adopted in future to discourage driving to jobs, shops and services.

8.60 Following consultation on the Engagement Draft, Swindon Borough Council made changes to the LTP3, which were subject to SEA screening where appropriate. The screening noted that the majority of changes were minor and not considered to be significant. However, the inclusion of additional text relating to the protection and enhancement of Green Infrastructure was considered a more significant change and one likely to have the potential for significant positive effects on SEA objectives relating to

biodiversity, climate change, health and the landscape. Other changes that are of more significance include that the LTP 3 now also encourages the high quality design of transport infrastructure, which will help to maintain and also improve the character and appearance of the Borough. This has the potential for significant positive effects on SEA objectives relating to landscape, townscape and cultural heritage. Further positive effects were also noted for the SEA objective relating to a safe and healthy environment, due to increased recognition in the LTP document of the interrelationships between health and transport and need for joint working on this issue.

8.61 A further change made to the LTP was its modification to account for the newly revised Swindon Core Strategy (due to be placed on public consultation in March 2011). The revised Core Strategy now proposes a reduction in housing growth from the Regional Strategy target of 36,000 houses to 25,000 for the period 2006-26 and this is reflected in the LTP. This has a subsequent effect on the need, timing and funding of transport interventions, and in particular infrastructure.

8.62 The implications for the LTP 3 SEA are that some of the predicted environmental effects of Swindon's proposed growth will occur more slowly, and with less effect. Impacts on emissions (greenhouse gases and other pollutants) are still predicted to increase, but not as quickly as was predicted in the Environmental report<sup>37</sup>. Other potential changes to the LTP SEA findings include a lessening in the potential adverse effects predicted for landscape, townscape and heritage and a lesser likelihood of congestion and noise pollution. Any future refresh of the LTP may include a reassessment of the impacts of slower growth projections; however in the interim, the SEA notes that the significance of adverse effects, primarily on air quality and climatic factors, will be reduced. In summary, the changes as a result of opting for a slower level of growth will be positive for sustainability.

## **Implementation and Monitoring**

8.63 In early 2011, the Council also prepared an Implementation Plan detailing the first year of the LTP3 and this has since been subject to an SEA. The SEA found that the Year One Implementation Plan will help to meet a number of the SEA objectives, with significant positive effects for community safety and other positive effects for sustainable transport and access, regeneration and Central Swindon.

8.64 However the SEA notes that Swindon's predicted housing and employment growth will lead to a further deterioration of air quality and

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<sup>37</sup> The DaSTS Swindon Transport Study<sup>37</sup>, noted that the forecasted increase in CO2 emissions from 2006 to 2026 under continuation of existing transport policies (i.e. with no increases to funding) would be 59%. It also noted that the forecasted increase in nitrogen oxides from 2006 to 2026 under continuation of existing transport policies (i.e. with no increases to funding) would be 69%. Similarly, particulate (PM10) emissions would rise 59%. The revisions of the housing targets are likely to reduce these figures considerably.

increase in greenhouse gas emissions in the immediate to longer term, unless a more substantial level of funding is provided for the implementation of sustainable transport projects. Due to government spending cuts, the Council's options in this regard are limited, however further funding is being pursued through Section 106 contributions and Central Government funding (for example, the Local Sustainable Transport Fund).

8.65 Local Transport Authorities are required to produce a monitoring framework including indicators and targets against which the progress of the LTP3 can be measured<sup>38</sup>. There is also a requirement to monitor the significant effects identified in the SEA and the Government advises that one monitoring strategy can incorporate the needs of both.

8.66 The Council has prepared a list of proposed SEA indicators based on existing monitoring programmes that include the Council's Annual Monitoring Report and National Indicator Set. This has been updated to incorporate minor recommendations made during the consultation on the Environmental Report. Chapter 10 of the LTP3 includes a further list of proposed indicators. The Monitoring Strategy is expected to be finalised in autumn 2011, when Government Plans for National Indicator sets are known and the One Swindon Monitoring programme is agreed. The SEA recommendations for monitoring will be considered then.

8.67 The Environmental Report was placed on consultation alongside the draft LTP3 Strategy for a period of 12 weeks. Comments were considered in the preparation of the final LTP3 strategy and Implementation Plan. The final Strategy is accompanied by an Environmental Statement outlining the difference the SEA process has made.

8.68 Swindon's LTP3 was also subject to a Habitats Regulations Assessment (HRA), which was carried out in parallel to the SEA process. The HRA assessed the impacts of the LTP3 in combination with the effects of other plans and projects, on European sites designated for their ecological status. This assessment also accompanied the LTP3 consultation and was reported separately.

### **Diversity Impact Assessment**

8.69 The Local Transport Plan aims to broaden access to services, facilities and opportunities for all members of the community. Diversity (Equalities) Impact Assessment is a tool for identifying the potential impact of a Council's policies, services and functions on its residents. It ensures that policies and services reflect the needs of all members of the community.

8.70 A Diversity Impact Assessment has been carried out for the draft LTP. A spreadsheet has been prepared to cover all the relevant transport policies and measures that may feature in Swindon Borough Council's LTP3.

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<sup>38</sup> DfT (2009) Guidance on Local Transport Plans

These include schemes drawn from the Swindon Transport Strategy and the Swindon DaSTS work. There is also information on the contribution these schemes will have to support the equalities agenda. These proposals identify and cover all aspects of transport planning.

8.71 To ensure good access for all of Swindon's communities, the delivery of schemes undertaken as part of LTP3 will be cross-referenced by the analysis that was undertaken for this Diversity Impact Assessment.

8.72 The emphasis of these schemes is promoting access to local services and facilities for local residents and visitors regardless of age, gender, race, faith, disability or sexual orientation. This focuses on alternative modes of transport to the private car and the safety and security of public transport services and associated infrastructure. This extends not only to the provision of traditional transport services but also encouraging greater flexibility such as demand responsive services, car clubs and increasing the availability and access to transport information.

### **Health Impact Assessment**

8.73 "Health Impact Assessment" can be defined as "the estimation of the effects of a specified action on the health of a defined population". Its purpose is to assess the potential impacts – positive and negative – of policies, programmes and projects; and to improve the quality of public policy decision making through recommendations to enhance predicted positive health impacts and minimise negative ones.

8.74 Its strength lies in providing a tool which enables informed policy decisions to be made based on a valid assessment of their potential health impacts, at the same time adding health awareness to policy making at every level.

8.75 It is based on a holistic, social model of health which recognises that the well being of individuals and communities is determined by a wide range of economic, social and environmental influences. It is not merely the absence of disease. It also looks at avoidable and unjust differentials in health status (often termed Health Inequalities). It is underpinned by the concept of equity in health, reducing health differentials and creating equal opportunities to achieve and sustain good health.

8.76 Transport is an important determinant of health and health inequalities. Transport and health are inextricably linked in terms of improving community wellbeing and access to services.

8.77 A Health Impact Assessment has been carried out for the draft LTP3. Having considered the links between issues related to health and transport four shared priorities have been identified. Transport can have a significant role to play in addressing these health issues. They are –

- Physical activity - Increasing the number of children and adults doing 30 minutes or more of moderate physical activity (on at least 5 days per week)
- Road Traffic Casualties – Reduction in the number of road traffic casualties (includes all road users – pedestrians, cyclists, motorists)
- Access to goods and services – Increase the accessibility of all local amenities (including health facilities, employment, training, healthy food, recreation)
- Air, Quality, Noise Pollution and Quality of life issues – Reduction in noise and air pollution and the loss of tranquillity as a result of transport.

8.78 In order to have a positive impact on the health of the community the LTP will need address these issues. If the LTP does not address these issues, or promotes policies that act contrary to these priorities, it is therefore likely to have a negative impact on the health of the local community.

8.79 The screening process has demonstrated that many of the transport interventions proposed for LTP3 are extremely positive and significantly outweigh the negative health impacts. The most positive interventions for health (ie scoring across most of the health priority areas) are those that promote –

- road safety
- walking
- cycling

8.80 The “Smarter Choices” interventions provide significant opportunities for joint working between the transport and health sectors.

## **The final LTP strategy**

### **Planning**

8.81 The original emphasis of LTP3 and DaSTS process was to determine a transport strategy for the period to 2026, in line with the (then current) Regional Spatial Strategy (RSS) and Local Development Framework (LDF) Core Strategy. Specific advice was requested from the DaSTS studies on interventions (in particular infrastructure) that should be implemented in the 2014-2018 period, to feed into the development of the new Local Transport Plan (LTP3).

8.82 However, as a result of the change of government in May 2010, the RSS has been rescinded. A key outcome from the removal of the RSS is that the rate of future development will be slower than envisaged in the RSS and this will be reflected in the revised draft LDF Core Strategy for Swindon. Precisely how much slower is yet to be determined in detail, but current indications are that previously envisaged development totals for housing and employment land in 2026 are now unlikely to be met until around 2035. This has a potentially profound effect on the need, timing and funding of transport interventions, and in particular infrastructure.

8.83 Having been assessed using INTRA-SIM which was built up using assumed development levels indicative to 2026 in the RSS, the life of the Emerging Preferred Strategy is also aimed at full build-out for this level of development. With anticipated changes in timing as noted, the strategy therefore has a de facto horizon year of approximately 2035.

### **Funding**

8.84 Even prior to the change in government in May 2010, there was significant pressure on funding streams. Since the change of government however, the Regional Funding Allocation process has been rescinded along with the RSS and the regional bodies responsible for dealing with the process. Local Transport Plan funding for 2011/12 to 2014/15 through central government grants will be reduced compared to recent years, with the reduction in the integrated allocation being particularly significant.

8.85 Such reductions in funding will necessarily impact upon the degree to which the component parts of the Emerging Preferred Strategy can be implemented. In essence, this will mean that interventions will need to be prioritised. Additional sources of funding will come on stream later than was previously envisaged and, even with most of the associated infrastructure costs for new developments being borne by the private sector, it will be important for the Borough Council to focus on the 'low cost : high value' interventions in the immediate future. Consistent with the Emerging Preferred Strategy, this will enable a sound foundation of sustainable transport measures to be established, allied to a specific programme of focussed infrastructure to facilitate economic growth.

8.86 With limited central funding over the next few years and the timing of new developments being slower than previously anticipated, the focus for the Borough Council should be on 'low cost : high value' interventions, supported by a limited number of specific infrastructure schemes. Many of these infrastructure schemes will be funded from developer contributions, with network wide improvements likely to be decoupled from the previous planned major scheme bids.

### **Economic Growth and Town centre regeneration**

8.87 During the preparation of LTP3, the national and local economic situation, increasing unemployment, and pressures on local businesses have given a sharper focus to local priorities around economic growth. Regeneration of the town centre remains a pressing concern in order to protect and promote the overall economic vitality of Swindon. These challenges are already well reflected in the list of key transport challenges but recent events have given them even greater emphasis.

8.88 A particular priority for Swindon is the regeneration of the town centre. In view of the continued recession and delays to bringing forward significant private sector funded projects the Council and its partners are seeking to "kick start" the process through selective schemes to upgrade the public infrastructure in the area.

8.89 A number of significant transport schemes have been brought forward as part of the delivery of an improved public realm in Swindon town centre. Much of the town centre environment is dominated by heavy traffic and the infrastructure required to manage it. These schemes seek to reduce the dominance of vehicular movement in the town centre and re-balance the needs of drivers and pedestrians to create an improved environment that is attractive for residents, visitors and those wishing to set up businesses in a re-invigorated town centre.

8.90 By improving the town centre environment through these schemes there will be a consequent reduction in highway capacity which will mean that much cross-town traffic that currently travels through the town centre will be redirected to other roads such as Great Western Way. There will be a number of schemes to improve the operation of the key junctions that will be affected by this traffic. This is in addition to schemes to improve the flow of traffic at a number of junctions that are under traffic signal control or on stretches of road where there are a number of traffic signal junctions close together. These schemes will improve conditions for all vehicles – including buses.

8.91 As well as schemes to improve general traffic flow for all vehicles there are schemes to provide specific public transport priority corridors. These are based around areas of significant housing growth and are designed to ensure that the town centre is easily accessible to residents of these areas, that public transport offers an attractive alternative to the private car, that additional car trips are not drawn into the town centre at the expense of the

town centre environment, and that the demand for costly extra road infrastructure linked to these developments can be minimised.

8.92 The Council will bid for funding to the Department for Transport's Local Sustainable Transport Fund in April 2011. A decision on the outcome should be announced in June 2011. If successful the schemes to promote sustainable transport initiatives (both capital and revenue funded) will be delivered through to 2014/15.

### **Road Safety and wider public health issues**

8.93 During the course of preparation of LTP3 it has become clear that road safety has increasingly become an area of public concern locally. This is, at least partly, due to the publicity around a small number of high profile accidents and their victims. It has also arisen as a result of decisions to withdraw funding from the provision of Safety Cameras and a subsequent decision to close the Wiltshire and Swindon Safety Camera Partnership.

8.94 Road Safety has also been given specific mention in the emerging "One Swindon" priorities. Whilst road safety as a challenge was implicit across the six key transport challenges identified earlier in the Swindon DaSTS Study the evolving local agenda means that it requires clearer acknowledgement in the description of the transport challenges facing Swindon.

8.95 Wider public health issues have also been raised as a challenge for Swindon. The main determinants of health lie outside of the healthcare system and are impacted by public policies in areas such as transport. The health of communities is an integral consideration for transport planning and transport is a key enabler or determiner of a range of public health outcomes.

8.96 It has therefore been considered appropriate for road safety and wider public health issues to be added in specific terms to the list of key transport challenges.

### **Final list of Challenges**

8.97 The revised list of transport challenges are therefore:

- Optimising the operation of key strategic transport corridors and the local road network to allow the efficient and reliable movement of people and goods, which are vital for the economic prosperity of the area
- Delivering transport measures and interventions that will accommodate housing and employment growth in an environmentally sustainable manner
- Contributing towards carbon reduction targets by achieving a shift to a more sustainable transport network
- Overcoming barriers and severance caused by key transport corridors and ensuring new developments are permeable for walking and cycling

- Improving accessibility to/from the town centre, and ease of movement within it, to support regeneration of the town
- Delivering transport solutions which are sympathetic to the local environment and do not adversely affect local quality of life
- Reducing the negative health impacts of the transport system both in terms of road safety, and the wider health effects of transport.

### **Transport Outcomes**

8.98 In order to demonstrate that the LTP policies have addressed the key transport challenges seven transport outcomes have been identified that should be achieved. These are:

- Improved journey time reliability for all forms of transport
- Improved road safety
- Increased overall share of journeys for public transport, walking and cycling
- Reduced need to travel and reduced dependence on the private car
- Improved accessibility
- Improved local environment and quality of life
- Improved access to the town centre

8.99 These outcomes are measurable through the targets and indicators set out in Chapter 10.

8.100 Each outcome supports several of the identified key challenges. Table 8.3 shows which outcomes demonstrate delivery of which challenges.

Table 8.3: Compatibility between Outcomes and Key Challenges

<p style="text-align: right;"><i>Outcomes</i></p> <p><i>Key Challenges</i></p>	Improved journey time reliability	Improved road safety	Increased share for public transport, walking and cycling	Reduced need to travel	Improved accessibility	Improved local environment and quality of life	Improved access to the town centre
Optimising transport corridors	•	•	•	•	•	•	•
Delivering environmentally sustainable development	•		•	•	•	•	•
Contributing towards carbon reduction targets			•	•		•	•
Overcoming barriers and severance			•	•	•	•	•
Improving accessibility to/from the town centre	•		•		•	•	•
Transport solutions sympathetic to the local environment	•	•	•	•	•	•	•
Reducing negative health impacts of transport - road safety and wider health impacts		•	•			•	



## **Transport Policies**

8.101 The interventions identified through the DaSTS INTRA-SIM modeling for inclusion in the Preferred Strategy as providing the best value contributions across the range of challenges have been distilled into six emerging transport policies to act as “headlines” for LTP3.

8.102 These policies (Policies A-F) set out the policy framework through which the Local Transport Plan will seek to address the key transport challenges by achieving the desired transport outcomes.

### **Policy A – Optimise the capacity of the highway network and improve journey time reliability for all forms of transport.**

8.103 Increasing levels of congestion affect both the efficient operation of the main road network and journey time reliability, impacting on economic productivity and discouraging investment in regeneration and economic growth.

8.104 The Local Transport Plan will work to better manage the existing highway network to ensure that existing capacity is optimised and used efficiently. This will entail using the latest traffic signal control technology and other traffic management techniques. It will involve the provision of up to date and accurate information to allow people to make informed decisions about their travel choices. It must also include measures to improve the attractiveness of alternatives to driving alone, particularly at peak periods.

Delivery options include

- The modernisation, removal, or conversion to part time operation of traffic lights where this will improve the operation of the highway
- Changes to road layouts and lane markings where this will improve the operation of the highway.
- Improve pre- and in journey travel information using static and mobile media
- Improve co-ordination of road works and management of special events
- Improve network resilience through planning for incidents and extreme weather events
- Priority measures for public transport services where they currently experience delays and unreliability on the network

### **Policy B – Improve road safety**

8.105 Road traffic collisions, as well as causing distress to those involved, also result in wider costs to society in terms of the cost of providing healthcare treatment to those injured, and loss of productivity. Accidents create tailbacks and delays that adversely affect journey time reliability.

8.106 The Local Transport Plan will seek to reduce incidences of speeding and unsafe road user behaviour through a range of education, engineering and enforcement measures. Particular attention will be given to improving road safety amongst vulnerable road users especially where this restricts their quality of life or travel choices.

Delivery options include

- Speed management measures where excess speeds are identified as an issue.
- Traffic management measures where accident records indicate potential issues related to the highway infrastructure.
- Safer Routes to School schemes and School Safety Zones.
- Road Safety education and training schemes eg cycle training
- Electronic speed warning signs
- Road safety publicity campaigns
- Specific schemes to address motorcycle casualties

**Policy C – Achieve and sustain a high quality, resilient and well maintained highway network for all members of the community**

8.107 Physical highway infrastructure deteriorates with age and use, and as a result requires regular maintenance to ensure it meets the needs of users and provides for the safe movement of people and goods. The economy of Swindon and quality of life of its residents depends on having a well maintained highway network that can cater for the movement of people and goods. The condition of the highway network is under pressure as a result of increasing numbers of extreme weather events and maintenance is of importance in order to increase the resilience of the network.

8.108 Highway maintenance investment will be targeted where it is needed most, and in a way that will ensure value for money whilst protecting and enhancing the condition of the network. Decisions will be based on the principles outlined in the Transport asset Management Plan.

Delivery options include

- Annual maintenance programme on classified (major) roads
- Annual maintenance programme on unclassified (minor) roads
- Maintenance of rural roads
- Reactive maintenance across the network
- Annual renewal programme for street lighting
- Annual programme of maintenance of highway structures
- Improvements to highway drainage at known flood risk locations

**Policy D – Integrate land use planning and transport to reduce the need to travel and mitigate the impact of new development on the transport network**

8.109 The location, scale, density and design of new development and the mix of land uses have a significant influence on the demand for travel. Encouraging development in the town centre, on brown field sites close to existing shops and services, and supporting, where viable, higher density, mixed use developments helps reduce the need to travel and the length of journeys, and makes it easier for people to walk, cycle or use public transport. It also reduces the need to fund expensive highway infrastructure.

8.110 The emerging Core Strategy will encourage mixed use developments to be brought forward in locations that are accessible by a range of travel methods. There will be encouragement to locate new housing and employment development within close proximity, to help reduce the need to travel and encourage the use of public transport, cycling and walking. Good design of residential developments will ensure that key services and facilities are provided locally and that neighbourhoods are walkable with good cycle and public transport links to nearby centres. Residential and workplace travel planning will be used to effectively manage the journeys created by development.

Delivery options include

- Higher density housing developments
- Mixed use development so employment is located close to housing
- Priority to re-use previously used (brown field) sites
- Concentration on regeneration of the town centre
- Design of developments to encourage walking, cycling and public transport
- Developer contributions to mitigate the impact of new development on existing transport networks

**Policy E – Deliver a high quality public transport network that is accessible, easy to use and supported by appropriate priority measures**

8.111 Improving the quality of public transport will widen travel choice giving a viable alternative to the private car for everyday journeys. For those without access to a car, buses and taxis are often the only realistic travel option for journeys to access goods and services. As Swindon town centre is regenerated more people will wish to access the area and it is essential that a good quality bus service is provided along the main corridors to the town centre. This will allow regeneration and growth to be accommodated while preventing deterioration of journey time reliability and the environmental impact of increased car use.

8.112 The Council will work closely with bus operators to support the commercial bus network. We will help plan and deliver service improvements and work towards a network of rapid transit corridors as economic growth progresses in future years. While focussed on the town centre the network will also cater for inter suburban journeys. The aim is to ensure that public transport provides a reliable and attractive alternative to the private car, with accurate and up to date information on how services are running. Measures

will focus on improving the affordability, convenience and attractiveness of public transport.

Delivery options include

- Development of proposals for a rapid transit network focussed on the town centre
- An orbital bus route for implementation as economic growth continues
- New bus exchange for the town centre
- Network management measures to address congestion at locations where bus services are delayed
- Expanded traveller pre and in journey information provision
- Improved bus stops
- Park and Ride services

**Policy F – Encourage behavioural change in transport by promoting alternatives to driving alone, and develop supporting infrastructure where appropriate**

8.113 Encouraging and making it easier for people to choose to walk, cycle or use public transport for everyday journeys offers a range of benefits for individuals and the transport network generally. By building increased physical activity, such as walking and cycling, into daily routines there are significant health benefits. An increased share of journeys undertaken by walking, cycling and public transport will reduce congestion and pollution on the road network, improving air quality and reducing accidents.

8.114 The Council will work closely with partners in the health sector (eg PCT), the bus operators, and the voluntary sector (eg Sustrans) to promote the full range of alternatives to driving alone. This work will also identify locations where additional supporting infrastructure is required.

Delivery options include

- Lift (car) sharing schemes
- Improved cycle parking facilities
- More off road cycle routes
- Marketing and promotion of travel choices
- Signing and way-finding for walking and cycling networks
- Improved walking and cycling routes in rural areas
- Improved public transport provision (as Policy E)

**Summary**

8.115 Table 8.4 illustrates the way in which the six policies support the delivery of the seven outcomes through which the key challenges will be shown to have been addressed through the LTP.

8.116 Each policy will be delivered by a range of appropriate measures included within the policy packages identified through the DaSTS INTRA-SIM testing as being the most effective across a range of indicators.

8.117 The over-arching “mission” for LTP3 can be summarised as being to create *“A safe, effective and fit for purpose transport network that supports Swindon’s ambitions for town centre regeneration and economic growth whilst protecting and enhancing quality of life and the environment for the benefit of local residents, visitors and businesses”*.

8.118 The result of this work has been to produce a “Preferred Strategy” of interventions which best address the identified challenges. The strategy can be summarized as being focused on *“low cost, high value interventions”*....*“founded upon a comprehensive package of sustainable transport measures, reinforced and supported by a number of specific infrastructure schemes”*.

**Table 8.4: Compatibility between Outcomes and LTP3 Policies**

<i>Outcomes</i>	Improved journey time reliability	Improved road safety	Increased share for public transport, walking and cycling	Reduced need to travel	Improved accessibility	Improved local environment and quality of life	Improved access to the town centre
<i>LTP3 Policies</i>							
Optimise the capacity of the highway network and improve journey time reliability for all.	•		•	•	•	•	•
Improve road safety		•	•	•			
Achieve and sustain a high quality, resilient and well maintained highway network for all members of the community	•	•				•	•
Integrate land use planning and transport to reduce the need to travel and mitigate the impact of new development on the transport network		•	•	•	•	•	•
Deliver a high quality public transport network that is accessible, easy to use and supported by appropriate priority measures	•		•	•	•	•	•
Encourage behavioural change in transport by promoting alternatives to driving alone, and develop supporting infrastructure where appropriate			•	•	•	•	•

## 9 Delivery and Finance

*This chapter sets out the general principles for delivering the Local Transport Plan strategy. It sets out details of the available funding sources and the overall approach to delivering against the goals set out in earlier chapters.*

9.1 The Borough Council has decided to produce a Local Transport Plan strategy document for the period 2011 to 2026 to tie in with the timescale of the emerging Swindon Core Strategy. Implementation and delivery plans will be produced to tie in with local government funding settlement periods, starting with the period from 2011/12 to 2014/15.

9.2 This chapter therefore sets out the general approach to implementation of the plan. Details for delivery during the first four year funding period will be set out in a separate “Implementation Plan” document once the funding position is confirmed.

9.3 Funding is available from a number of sources to implement the Local Transport Plan.

- Department for Transport funding streams
- Regional Growth Fund
- Tax Increment Financing
- Capital funding from the Council’s own resources (into areas such as highway maintenance)
- Revenue funding from the Council’s own resources (into areas such as bus service revenue support)
- Developer contributions obtained through the planning process to provide transport improvements in the vicinity of new developments

9.4 The Comprehensive Spending Review (CSR) announced by central government on 20 October 2010 provided details of overall levels of funding to be made available for transport nationally over the four years of the CSR period (2011/12 to 2014/15). The CSR indicated that national funds for the LTP Integrated Transport block and Highway Maintenance block would both be significantly reduced compared to 2010/11 levels.

9.5 As part of the CSR the Department for Transport announced that it was reducing the number of funding streams from 26 to just four. These are

- Block funding for small (ie less than £5 million) transport improvement schemes (ie the Integrated block) (capital)
- Block funding for highways maintenance (capital)
- Major schemes (ie over £5 million) (capital)
- A Local Sustainable Transport Fund (revenue and capital)

9.6 All other local transport grants will in future be paid via the Department for Communities and Local Government’s formula grant system.

The Integrated and Maintenance block funding is allocated according to a needs-based formula. Major Scheme and Local Sustainable Transport Fund streams are allocated through a bid based process. The Local Sustainable Transport Fund will provide £560 million of revenue and capital funding to enable local authorities to bid for funds to support the delivery of packages of sustainable measures that support economic growth and reduce carbon emissions while delivering cleaner environments, improved safety and increased levels of physical activity. Details of the bidding process were published in January 2011.

9.7 In view of the timescales involved in these announcements and the significant uncertainty around the potential reductions in future funding levels it was not possible to produce a draft "Implementation and Delivery Plan" to sit alongside the draft LTP strategy document for consultation in autumn and winter 2010. A delivery plan for the first year of the LTP3 period (ie 2011/12) will be produced in early 2011 when the levels of available funding are confirmed. An implementation plan for the remainder of the funding period (ie 2012/13 to 2014/15) will be produced in autumn 2011 once the implications of the funding settlement have been more fully assessed.

9.8 For information, central government capital allocations for Swindon in the five years of the second Local Transport Plan are shown in Table 9.1. The "Integrated" category covers all the capital schemes put forward in delivering the LTP strategy around walking, cycling, public transport, road safety and traffic management.

Table 9.1: LTP2 DfT Allocations (rounded to nearest £000)

	06/07	07/08	08/09	09/10	10/11	Total
Total allocation	4.438	4.607	4.311	4.168	4.096	21.620
Integrated	3.240	3.169	2.861	2.573	2.262	14.105
Maintenance	1.198	1.438	1.450	1.595	1.834	7.515

Note - From 2007/8 the integrated schemes total includes the Specific Road Safety Grant (Capital) of £90k (07/08), £86k (08/09), £85k (09/10) and £82k (10/11)

9.9 In December 2010 the Government announced the details of the funding settlements for individual local authorities. The transport funding allocation for Swindon is set out in table 9.2. The Government also announced that, in future, this funding would be paid entirely as grant rather than being mainly "permitted borrowing". This is a positive move for Swindon as previously the Council had to pay interest on this borrowing which simply added to the debt burden of the Council.

Table 9.2: LTP funding allocations 2011/12 to 2014/15 (£000's)

	11/12	12/13	13/14*	14/15*
Total allocation	4.018	4.071	3.950	4.370
Integrated	1.314	1.401	1.401	1.970
Maintenance	2.704	2.670	2.549	2.400

\* Provisional allocation

9.10 The government believes that it is essential highways maintenance continues to be prioritised reflecting the economic and social importance to local communities of the highway network and the long term liabilities that can be created by short term cuts in maintenance.

9.11 From table 9.2 it can be seen that Swindon has benefited from the revised needs-based formula for allocating maintenance funding. In contrast the level of funding for Integrated schemes has reduced significantly. This will have implications on the ability to deliver against a number of LTP3 objectives. In the light of this it will be important to maximise funding from other sources such as through the Local Sustainable Transport Fund.

9.12 The criteria used to determine funding priorities for scheme implementation will be—

- The extent to which a scheme delivers the national transport goals (as prioritised locally)
- The extent to which a scheme delivers the local goals of the Sustainable Community Strategy and “One Swindon”
- The extent to which a scheme offers value for money
- The extent to which a scheme delivers across a range a goals and objectives
- The extent to which a scheme is realistic and deliverable and the level of risk.
- The extent to which a scheme contributes to specific targets
- The extent to which schemes can be delivered in a co-ordinated manner to maximise impacts while gaining economies of scale and value for money

9.13 There will be an even greater need to look for innovation in scheme delivery in order to obtain best value for money and to get the most out of the restricted levels of funding that will be available. Innovation will include the use of new technology and technical processes as well as streamlined project management and co-ordination techniques.

9.14 Table 9.3 sets out the potential schemes included in each of the policy packages assessed using the INTRA-SIM decision support tool. Initiatives have been set out at high, medium and low levels. The table includes estimates of capital and revenue costs along with assessments covering the overall risk, affordability, value for money, deliverability and feasibility.

### **Major Transport Schemes**

9.15 The Major Schemes process seeks to provide local transport authorities with the necessary capital funding to allow them to take forward public transport and highway schemes that support the objectives of their Local Transport Plans but which would otherwise be unaffordable from the Integrated Transport or Maintenance block allocations or from other sources.

The Major Schemes process provides capital funding for schemes costing over £5m. A local contribution of at least 10% of the scheme value is required. This contribution cannot be from the LTP Integrated Transport of Maintenance block allocations. The process does not provide funding for revenue schemes.

9.16 In order to secure funding through this process a scheme needs to contribute to the five goals of national transport policy set out in the Department for Transport's "Delivering a Sustainable Transport System" (DaSTS). A scheme must also demonstrate a case across five key areas –

**Strategic** – consistent with and will contribute to local, regional and possibly national objectives in transport and other relevant areas

**Appraisal and value for money** – when appraised against central government's five objectives for transport of economy, environment, safety, integration and accessibility the scheme's benefits against its costs provide a sound, value for money case.

**Delivery** – the scheme can be delivered to time and budget, including a clear project plan, governance arrangements, plans for stakeholder involvement and engagement, and robust risk management plans.

**Financial** – the scheme is based on sound costings, that the authority is able to meet its own contribution and that any proposed third party funding is confirmed.

**Commercial** – the scheme has a sound procurement strategy.

There is a three stage approval process –

**Programme Entry** – this is granted once an initial business case has been approved by the Department for Transport.

**Conditional Approval** – once statutory powers such as planning consent are in place.

**Full Approval** – once procurement has been undertaken and final contract prices have been secured.

9.17 Since becoming a Local Transport Authority in 1997 Swindon Borough Council has not progressed any potential Major Scheme as far as Programme Entry stage. Experience of other authorities is that taking schemes through this process takes considerable time and requires significant resources in terms of finance and skilled staff. It is common for it to take anything from 8 to 12 years to take a potential Major Scheme from inception to completion and for the costs associated with the process to amount to several million pounds. Costs up to Programme Entry stage must be covered by the Council and are incurred entirely "at risk" with no guarantee that a potential bid will succeed. Once a scheme achieves Programme Entry costs are shared with the Department for Transport. Once approved, any scheme over spend from the original budget is a risk that falls entirely on the Council.

9.18 The cost of the Major Scheme process, the time it takes for schemes to be implemented and the risks carried by the Council are a significant constraint in bringing forward major transport infrastructure.

However, without the funding available from the Major Scheme process it is not clear how the very significant transport infrastructure required to facilitate Swindon's aspirations for regeneration and growth can be delivered.

9.19 Recognising the issues around the Major Scheme process the Department for Transport is seeking ways to accelerate delivery and reduce the development costs of Major Schemes. Pilot schemes have taken place with certain authorities to explore the benefits of earlier engagement in the process with the Department for Transport and greater alignment of modelling and appraisal requirements to be proportionate to the risk and complexity of individual schemes. Experience is suggesting significant benefits are arising from these pilot schemes in terms of time and costs. Information on a more general application of the lessons learnt from the pilots to other schemes is awaited from the Department for Transport.

### **Swindon Major Schemes**

9.20 From Swindon's first Local Transport Plan and into LTP2 the Council pursued the idea of a Major Scheme bid around increasing highway capacity on the Purton Road to Iffley Junction (Great Western Way) corridor in the north and north west of Swindon. Substantial S106 developer contributions were secured from the Northern Sector urban extension in order to mitigate the traffic impacts of the development. The scheme that was identified provided increased capacity from Thamesdown Drive through to Great Western Way either through a new road on one of a number of alignments or by upgrading the existing link provided by Mead Way. To reflect changes in the transport policy background during LTP2 the potential Major Scheme bid was re-focussed as the "North Swindon Transport Strategy" which combined a public transport priority corridor between the Northern Sector and the town centre with measures to address the traffic issues on the Purton Road to Iffley Junction corridor.

9.21 The Swindon Transport Strategy (2009) brought forward proposals for a rapid transit network as the priority for transport infrastructure investment for the future. This comprises three primary routes to the major expansion areas and an orbital route that will be introduced once the expansion areas are complete.

9.22 The Council submission to the South West Region as part of the Regional Funding Allocation refresh process (RFA2) in 2009 saw the previous potential Major Schemes replaced with proposals for a two phase rapid transit Major Scheme bid. This would provide benefits across the whole of Swindon (rather than being confined to the north and north west), would provide benefits for future urban extensions elsewhere in Swindon, and would promote sustainability through improving public transport access from peripheral areas to the regenerated town centre.

9.23 The RFA2 submission from the Region to the Department for Transport in 2009 identified a funding guideline for Swindon of £30m over the period 2014-19. The £30m figure for Swindon in the RFA represents spend on

the rapid transit network – with the whole of Phase 1 of developing the rapid transit network at £20m and a contribution of £10m to Phase 2. The remainder of Phase 2 (£90m) is anticipated to follow over the period 2019-26.

9.24 In 2010 the new government abolished the Regional Funding Allocation process and set about a complete review of the Major Scheme Bid system. There have been significant reductions in funding for Major Schemes and existing schemes are being re-assessed and re-prioritised. They are also being required to make significant cost reductions or look for alternative sources of funding.

### **Future plans**

9.25 The Council has been re-considering its approach to a potential Major Scheme Bid. This is in view of the costs of submitting a bid and associated financial risk to the Council, the timescales before any scheme could be implemented based on the operation of the current major scheme process, the continued depreciation of the S106 funding held by the Council as its contribution, and the growing risks and uncertainties around central government funding and the Major Scheme process.

9.26 It appears that the timescale and risks of the Major Scheme bid process mean that it cannot be relied upon to allow Swindon to deliver its urgent priorities around regeneration and growth. The particular importance to Swindon of the regeneration of the town centre means that there is a pressing need to direct available funding to schemes that can act as a catalyst to this priority area.

9.27 Rapid Transit Phase 1 comprises a package of measures to address the key junctions on the Swindon road network that require attention to reduce the impact of traffic congestion on public transport travel times and reliability. Phase 2 comprises further major infrastructure on the proposed rapid transit network.

9.28 The recent Swindon DaSTS Study has confirmed that the rapid transit proposals from the Swindon Transport Strategy meet the requirements of the five key DaSTS transport goals and should be taken forward as priority schemes in the capital programme.

9.29 It is therefore proposed to carry out a review of both the overall package of schemes comprising Phase 1 and the individual schemes within Phase 1 themselves. Consideration is being given to breaking down the Rapid Transit Phase 1 package to allow the most urgent elements to form a series of discrete projects to be taken forward individually or incrementally using existing funding sources (primarily existing S106 contributions).

9.30 In the meantime further information is awaited from the Department for Transport on the outcome of their review of the Major Scheme Bid process. The government has indicated its intention to develop streamlined arrangements for prioritising major schemes for future spending review

periods. The aim is to give elected representatives and business interests a stronger role in scheme prioritisation and possibly to devolve decisions to Local Enterprise Partnerships. It is also planning to reduce the assessment and appraisal burden on local authorities during the bidding process. Consultation with interested parties is to take place “during 2011”.

9.31 Once information is available on the revised process for Major Schemes a decision can be reached as to the best approach for Swindon to follow in respect of a potential future Major Scheme. This will reflect the need Swindon has for early delivery of key transport infrastructure and the implications on delivering key priorities around growth and regeneration that the failure to secure this key infrastructure will have.

9.32 Table 9.3 – Policy Packages and potential schemes

## Policy Packages & Level of Application

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
		Capital (approx)	Revenue (per annum)		Summary	Notes

### PP1 – Rail

This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was not included in the 'economic' or 'balanced' optimised scenarios, and is not explicitly included in the Emerging Preferred Strategy as a policy package at any level. However, many of the initiatives are the responsibility of the rail industry to develop and fund. As such, these should be supported by the strategy, but assuming SBC involvement is limited to in principle support and lobbying. Also, some station related elements can be linked with other policy packages (such as PP3 and PP4) and/or regeneration of the town centre, and could therefore be included in the strategy by this connection. Rail industry funding will also be a part of these elements, where initiatives are on-station or part of the forecourt

LOW	Infrastructure service improvements	Public realm improvements to the rail station forecourt to improve the pedestrian environment (Network Rail)	£1m-£2m		Part (links to PP3, PP10)	Limited	Specific proposals would be dependant on developers and town centre regeneration as well as funding from rail industry.
	Rail access and interchange	Rail Station Travel Plan to provide greater opportunities for cycling and walking Address car parking management issues	£1m-£2m		Part (travel plan links to PP11)	Limited	In principle support for development of travel plan could be encouraged as part of PP11, though its development is the responsibility of the rail industry. Parking issues are the responsibility of the rail industry
	Information and Marketing	Broadening the market appeal of the of rail information/ services	£500k-£1m		Part (links to PP11)	No direct	In principle support for information improvements
MED	Rail access & interchange	Improved bus-rail interchange (at Swindon station)	£4m-£8m		Part (links to PP2, PP10)	Limited	Specific proposals would be dependant on developers and town centre regeneration as well as funding from rail industry
	Infrastructure and service improvements	The re-doubling of the Swindon Kemble line (Network Rail, RFA)	>£50m		Potential	No direct	In-principle support for developing rail industry plans
		Construction of district rail stations within the Swindon Borough to promote local rail commuting opportunities	>£50m		Potential	No direct	In-principle support for developing rail industry plans
	Information	Off-peak railcard – extending the Network	£100k-£250k		Potential	No direct	In-principle support and potential

Policy Package, Level & Initiative		Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
			Capital (approx)	Revenue (per annum)		Summary	Notes
	and Marketing (fares & ticketing)	Railcard boundary to include Swindon to provide reduced cost rail travel fares					lobbying for changes to ticketing systems
HIGH	Electrification	Electrification of the Great Western rail network – London Paddington-Bristol, Swansea, Oxford and Newbury (DfT).	>£50m	£1m-£2m	Potential	No direct	In-principle support for developing rail industry plans
	Upgrade of rolling stock	Introduction of the Inter-City Express train to replace the current InterCity125 fleet (increasing speed of journeys).	>£50m	<£100k	Potential	No direct	In-principle support for developing rail industry plans
PP1 HIGH cont/d	Innovative rail based solutions	Development of light rail corridors to serve Swindon Town Centre and the expansion districts (for example the Eastern Development Area)	>£50m		No		Unlikely to be deliverable
	Innovative rail based solutions	Construction of a high-speed rail network paralleling the existing Great Western rail network/M4 corridor	>£50m		Potential	No direct	In-principle support for developing rail industry plans
	Information and Marketing (fares & ticketing)	Smartcard ticketing technology for all passenger transport services – similar to the Oyster card in London (DfT)			Potential	Limited	Links with PP2 integrated ticketing initiatives for bus services. Linkages to rail can be problematic, but supported by strategy

### PP2: Bus

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'economic' optimised scenario (not 'balanced'). It is not fully included in the Emerging Preferred Strategy as a policy package. However, many of the initiatives (including elements in the low, medium and high levels) should be supported by the strategy, some as a result of links to other packages. SBC involvement varies across the elements

LOW	Improved access to bus services	Improve accessibility of bus services including stop locations, pedestrian crossings and safe walking routes	£1m-£2m		Part (links to PP3 & PP7)	Limited	Specific proposals would be dependant on links to local safety schemes, as well as developments and town centre regeneration
		Upgrade bus stop facilities	£500k-£1m		Part (links to PP3 & PP7)	Limited	Specific proposals would be dependant on links to local safety schemes, as well

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
						as developments and town centre regeneration	
	Marketing and Information provision	Improved marketing and use of passenger information systems to encourage travel by bus	£250k-£500k		Part (links to PP11)	Some	Support for information improvements as part of behavioural change measures
	Bus priority	Implement bus priority measures at key locations (eg traffic signal priority, clearways) to reduce delay and improve reliability	£500k-£1m	£250k-£500k	Part (links to PP7)	Limited	Specific proposals would be dependant on links to local safety schemes, as well as developments and town centre regeneration
	Bus network improvements	Retain basic subsidised network (rural, evening and Sunday)		£250k-£500k	Yes	Yes	
MED	Bus Station	Improvements to existing bus station	£1m-£2m	£100k-£250k	Part (links to PP10)	Limited	Specific proposals would be dependant on developers and town centre regeneration
	Marketing and Info provision	Extension of real time information system to medium level	£250k-£500k	<£100k	Part (links to PP11)	Some	Support for information improvements as part of behavioural change measures
	Bus Priority	Implement bus priority measures along key bus service routes	£2m-£4m	£250k-£500k	Part (links to PP7)		Specific proposals would be dependant on links to local safety schemes, as well as developments and town centre regeneration
PP2 MED cont/d	Bus network improvements	Improved level of subsidised services (rural, evening and Sundays)		£500k-£1m	No		Additional revenue cost unlikely to be justified
	Integrated fares and ticketing	Smart ticketing to encourage increased patronage	£100k-£250k	<£100k	Potential	Limited	Bus industry leads
HIGH	Marketing and information provision	Extension of real time information to the highest level (largest affect on patronage)	£500k-£1m	<£100k	No		
	Bus Network Improvements	Kick start type services providing new links including demand responsive services		£500k-£1m	No		Potential for grant funding from DfT or equivalent could be explored if available

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
						and specific proposals applicable	
	Integrated fares and ticketing	Free and promotional fares and passes		£250k-£500k	No		
	Bus priority	Bus rapid transport network (key corridors)	>£50m	£250k-£500k	Part	Limited in short term	Development of network proposals should continue, with some elements implemented in the shorter term, particularly subject to linkages with future major developments
	New Bus Station	Relocation and integration of bus station within the redevelopment of the town centre	£4m-£8m	<£100k	Part (links to PP10)	Limited	Specific proposals would be dependant on developers and town centre regeneration

### PP3: Walk

This policy package is very well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was included in both the 'economic' and 'balanced' optimised scenarios. It is included in the Emerging Preferred Strategy as a policy package at the medium level							
LOW	Marketing and information	Production of walking maps for town centre Active travel directions to employers that encourage walking	<£100k		Yes	Yes	
	New developments / growth areas	Ensure signage, crossings and connections in village centres, connecting schools, employment, retail and housing	<£100k		Yes	Yes	
MED	Improve pedestrian connections	Improve signage, crossings and connections in the village centres, connecting schools, employment, retail and housing	£250k-£500k		Yes	Yes	
	Improve pedestrian environments	Public realm schemes in town centre	£250k-£500k		Yes	Yes	
HIGH PP3	Improve pedestrian connections	Improve connections where rail lines, dual carriageways and the motorway severs communities	£1m-£2m		No	No direct	Although not specifically included in the strategy, this element could have potential to be partly provided through links to developments, local safety

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
		Capital (approx)	Revenue (per annum)		Summary	Notes
						schemes and regeneration initiatives. In principle support would therefore be recommended

#### PP4: Cycle

This policy package is very well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was included in both the 'economic' and 'balanced' optimised scenarios. It is included in the Emerging Preferred Strategy as a policy package at the medium level

LOW	Cycle training	Adult and school cycle training schemes		<£100k	Yes	Yes	
	Cycle network improvements	Complete basic cycle network in Swindon borough, join up gaps in the network	£500k-£1m		Yes	Yes	
	New developments / growth areas	Development control to ensure cycle storage and cycle network built into new residential and workplace developments	£1m-£2m		Yes	Yes	
MED	Cycle network improvements	Cycle priority in the form of contraflow lanes, shared lanes and advance stop lines	£100k-£250k		Yes	Yes	
	Cycle Parking	New cycle parking infrastructure at key leisure, employment and retail sites in the borough	£100k-£250k		Yes	Yes	
HIGH	Cycle network improvements	Improve cycle connections where rail lines, dual carriageways and motorway severs communities. Build "utility network" of on road cycle lanes on direct arterial routes	£4m-£8m		No	No direct	Although not specifically included in the strategy, this element could have potential to be partly provided through links to developments, local safety schemes and regeneration initiatives. In principle support would therefore be recommended
	Cycle Parking	Network of long stay commuter cycle parks.			No	No direct	Potential to be partly provided through links to developments and regeneration initiatives. In principle support would therefore be recommended

#### PP5: Highway Infrastructure

This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was not included in the

Policy Package, Level & Initiative		Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
			Capital (approx)	Revenue (per annum)		Summary	Notes
<p>'economic' or 'balanced' optimised scenarios, and is not explicitly included in the Emerging Preferred Strategy as a policy package at any level. However, some elements of the highway infrastructure policy package are directly related to developments, and would therefore be funded by developers</p>							
LOW	Asset Management plan (AMP)	Not implemented	£1m-£2m	£250k-£500k	N/A		
	Surface water Management Plan (SWMP)	Not implemented	£250k-£500k		N/A		
	Access to new development	Provide access only improvements for new developments	£1m-£2m		If required	Limited	Specific proposals would be dependant on developments
	Capacity	No major capacity projects on strategic corridors (White Hart Junction and Mead Way remain unchanged)			N/A		
MED	Asset M'gmt Plan (AMP)	Partial delivery of the plan	£2m-£4m	£250k-£500k	Part (links to PP7)	Limited	Specific proposals would be dependant on links to local safety schemes
	Surface Water M'gmt Plan (SWMP)	Partial delivery of the plan	£500k-£1m		Part (links to PP7)	Limited	Specific proposals would be dependant on links to local safety schemes
	Access to new developments, and essential improvements	Delivery of basic access requirements plus corridor improvements such as Mead Way, Oxford Road and Great Western Way	£8m-£16m	£100k-£250k	If required	Limited	Specific proposals would be dependant on developments
HIGH	Asset M'gmt Plan (AMP)	Prioritise and implement all measures identified under AMP	£2m-£4m	£250k-£500k	Part (links to PP7)	Limited	Specific proposals would be dependant on links to local safety schemes
	Surface Water M'gmt Plan (SWMP)	Prioritise and implement all measures identified under SWMP	£1m-£2m	£100k-£250k	Part (links to PP7)	Limited	Specific proposals would be dependant on links to local safety schemes
	Climate Change	Increase capacity of drainage by 30% to reduce pressures of climate change	£4m-£8m		Part (links to PP7)	Limited	Specific proposals would be dependant on links to local safety schemes
	Full delivery of infrastructure	Includes bridges over A419 and other major infrastructure projects such as Purton to	>£50m		If required	Limited	Specific proposals would be dependant on developments

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
	required for housing and employment	Great Western Way link					

### PP6: Traffic Demand Management (including pricing)

This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was not included in the 'economic' or 'balanced' optimised scenarios, and is not explicitly included in the Emerging Preferred Strategy as a policy package at any level. However, some elements of the traffic demand management policy package may be linked to other policy packages and could be delivered as part of related initiatives

LOW	Intelligent Transport Systems	Selective expansion of UTMC system to include additional data sources and dissemination methods	£250k-£500k		Potential (links to PP7)	Yes	Linked to development of bus priority measures & rapid transit
	Traffic Management Programme	Routeing strategy for goods and other vehicles with associated signing improvements	£250k-£500k		Potential (links to PP7)	Limited	Routeing linked to behavioural change and signage linked to local safety schemes
	Traffic Management Programme	Selective measures to discourage use of unsuitable routes	£500k-£1m		Potential (links to PP7)	Limited	Encouragement rather than physical measures as part of maintenance and behavioural change
MED	Intelligent Transport Systems	Expansion of UTMC system to main routes across the Borough	£1m-£2m		Potential (links to PP7)	Limited	Potentially upgraded as part of maintenance or linked to developments
	Traffic Management Programme	Measures to improve access by multi occupancy vehicles/at off peak times	£500k-£1m		Potential (links to PP11)	Limited	Encouragement rather than physical measures as part of behavioural change
HIGH	Intelligent Transport Systems	Borough wide UTMC system with active traffic management	£16m-£50m	£100k-£250k	No	Limited	Linked to development
	Pricing	Work place parking charges, public car park tariffs, road user charging	£1m-£2m	£100k-£250k	No		Unlikely to be acceptable

### PP7: Maintenance & Safety

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (not 'economic'). It is included in the Emerging Preferred Strategy as a policy package at the low/medium level. However, some of

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
		Capital (approx)	Revenue (per annum)		Summary	Notes

the initiatives in the high levels could be supported by the strategy, some as a result of links to other packages

LOW	Highway maintenance	To maintain the existing condition of the highway, including do minimum for structures.	£2m-£4m	£1m-£2m	Yes	Yes	
	Safety schemes – Road safety education and enforcement	Scheme management ongoing as part of highway Maintenance and education and enforcement borough wide.	£500k-£1m		Yes	Yes	
PP7 LOW cont/d	Carbon efficiency of street light	Replacement of existing light to remain at current standards.		£100k-£250k	Yes	Yes	
MED	Highway Maintenance	Reduce the backlog of maintenance by 2016 including the upgrade of structures.	£8m-£16m		Part	Yes	This is the most significant (cost) element of the policy package. Note that the most significant benefits from this policy package are for safety indicators, so tending to suggest that safety schemes should take priority (if applicable)
	Safety schemes	Implementation of small to medium schemes within LTP Programme not on A and B roads. Reduce speeds on some rural road where physical works not required.	£2m-£4m	£100k-£250k	Yes	Yes	(see previous note)
	Carbon efficiency of street lighting	Replacement through ongoing maintenance programme.		£100k-£250k	Potential	Yes	Replacement programme will be dependant on need and availability of suitable mechanism and funding
HIGH	Highway Maintenance	Improve quality of durability through improved standard in maintenance of existing highway infrastructure.	£2m-£4m		Part	Yes	There is scope to seek durability improvements as part of general maintenance
	Safety schemes	Delivery of significant safety schemes identified within SPAR (including physical	£500k-£1m		Potential	Yes	The most significant benefits from this policy package are for safety indicators,

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
		Capital (approx)	Revenue (per annum)		Summary	Notes
	works on all road types)					so tending to suggest that further safety schemes could be considered
Carbon efficiency of street lighting & traffic signals	Increased efficiency through systematic replacement.		£500k-£1m	Potential	Yes	Replacement programme will be dependant on need and availability of suitable mechanism and funding

### PP8: Parking Management

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'economic' optimised scenario (not 'balanced'). It is not fully included in the Emerging Preferred Strategy as a policy package at any level, though some initiatives at all levels could be supported by the strategy

LOW	Enforcement	Enforcement of parking policies			Yes	Yes	Support for this element does not incur significant cost
	Controlled Parking Zones	Residents parking zones, disabled bays, loading only			Yes	Yes	Support for this element does not incur significant cost
	Promote economic development	Encourage long-stay retail parking to support increased dwell times in the town centre			Potential	Yes	But should also consider the need provide alternatives to driving into the centre. Contradicts with the aims of elements of the medium and high level parking policy package that also have potential for in principle support
	Improve public service	Improve accessibility, affordability and appearance of parking provision, particularly in the town centre	£250k-£500k	<£100k	Potential		Contradicts with the aims of elements of the medium and high level parking policy package that also have potential for in principle support
	Real time car park information (VMS)	Introduction of VMS to reduce average time spent searching for a space by 50% (CAAP)	£100k-£250k		Potential	Limited	Linked to ITS and other initiatives under PP6, which could potentially be incorporated into the strategy
	Intelligent Transport	Improve parking information and reduce circulating and through traffic			Potential	Limited	Linked to ITS and other initiatives under PP6, which could potentially be

Policy Package, Level & Initiative		Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
			Capital (approx)	Revenue (per annum)		Summary	Notes
	Systems (ITS)						incorporated into the strategy
MED	Controlled Parking zones	Extend CPZs			Yes	Yes	Support for this element does not incur significant cost
	Change parking supply over time	Achieve optimum parking standards in new and existing developments			Yes	Yes	Support for this element does not incur significant cost
	Review parking charge regime	Higher parking costs in local destinations with good public transport accessibility			Potential	Yes	Dependant on other policy package (such as PP2) delivering better accessibility Contradicts with the aims of elements of the low level parking policy package that also have potential for in principle support
PP8 MED cont/d	Introduction of 'safe parking' accreditation	Improved safety for pedestrians and vehicles in car parks			Potential	Some	Potential to be partly provided through links to developments and regeneration initiatives. In principle support would therefore be recommended
	Preferential parking for more sustainable travel	Reduced charges or specific parking provision for car club, car share, alternative fuelled vehicles/low carbon emission and improved cycle parking provision			Potential	Some	Contradicts with the aims of elements of the low level parking policy package that also have potential for in principle support
	Urban realm improvements	Removal of unnecessary taxi parking, better cycle parking facilities, provision of powered two wheeler parking, improved signage			Potential	Yes	Support for this element does not incur significant cost Contradicts with the aims of elements of the low level parking policy package that also have potential for in principle support
HIGH	Parking charges over time	Higher parking charges key destinations			Potential	Some	Contradicts with the aims of elements of the low level parking policy package that also have potential for in principle support

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
	Work Place Parking Mechanisms	Charges levied on future non-residential developments			No		Unlikely to be acceptable
	Relocation of car parking to north of the Station	1000 parking spaces north of station which will, combined with new footbridge, improve access to the station from the north (CAAP)			Potential	Limited	Potential to be partly provided through links to developments and regeneration initiatives, as well as rail industry measures. In principle support would therefore be recommended

#### PP9: Park and Ride

This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was not included in the 'economic' or 'balanced' optimised scenarios, and is not explicitly included in the Emerging Preferred Strategy as a policy package at any level. However, while comparatively expensive, Park & Ride is potentially an important mechanism for accessing the town centre some Park & Ride elements could be incorporated, related to developments.

LOW	<ul style="list-style-type: none"> <li>Viability study</li> </ul>	<ul style="list-style-type: none"> <li>Viability study looking at existing and future park and ride provision</li> </ul>	<£100k		Yes	Yes	To seek linkages with wider transport strategy and proposed developments
	Information provision	Maintain existing information provision and marketing	£500k-£1m		Yes (part of PP2 and PP11)	Yes	Effectively part of wider transport information initiatives/requirements
	Expansion of existing system	Increase existing capacity at Wroughton	£1m-£2m		Possible		Subject to viability study, but is not considered likely to be necessary
MED	Information provision	Improvements to information provision, marketing and facilities	£250k-£500k		Yes (part of PP2 and PP11)	Yes	Effectively part of wider transport information initiatives/requirements
PP9	Expansion of existing system	Increase operating hours and frequency of service	£250k-£500k		Possible		Subject to viability study, but is unlikely to be necessary
	Improved interchange	Identification of key interchange points and provision of high quality facilities that enable	£1m-£2m		Potential	Some	Linkages to PP2

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
		and encourage passengers to change between services					
	Charges	Ensure charges are competitive with other modes	£250k-£500k		N/A	Some	Depends on whether future Park & Ride sites are developed at all, and with separate bus services. Currently, bus links at the existing Park & Ride site in Wroughton are provided using bus services, with the same fares
HIGH	Expansion of existing system	Additional sites at Commonhead, Wichelstowe, EDA and Highworth Road	£2m-£4m		Possible	Some	Subject to viability study and subsequent availability of linkages with developments and bus services (to provide funding)
	Improved journey time	Greater bus priority	£2m-£4m		Potential	Some	See PP2
	Improved interchange	New bus exchange	£4m-£8m		Potential	Some	See PP2
	Re-branding	Re-branding of P&R network and significant marketing campaign	£250k-£500k		Potential	Yes	Effectively part of wider transport information initiatives/requirements
	Co-ordinated services	Better co-ordination of services and joint working with key partners to provide improved services to key destinations	£250k-£500k		Potential	Some	Effectively part of wider transport information initiatives/requirements

### PP10: Land-Use Planning

This policy package is very well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was included in both the 'economic' and 'balanced' optimised scenarios. It is included in the Emerging Preferred Strategy as a policy package at the medium level.							
LOW	Regional Spatial Strategy	Continued implementation of RSS with assessment of sites as and when they come forward (no 'cumulative assessment')	<£100k	£100k-£250k	Yes	Yes	The Regional Spatial Strategies have been cancelled, and as such the development targets contained within it no longer apply. The LDF Core Strategy is therefore being reviewed. Future total
	CAAP	Continued focus on regeneration of the town centre (urban containment)	£16m-£50m		Yes	Yes	

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
MED	Core Strategy	Continued implementation of RSS through the Swindon Borough Core Strategy, better strategic co-ordination of development site take-up	>£50m	£100k-£250k	Yes	Yes	development figures are likely to be maintained, but the trajectory pushed out to a longer horizon (than 2026 from the RSS).
	Review of policy aspirations	Potential for dispersal between Swindon and other local centres with adequate provision of facilities and medium density development	>£50m	£100k-£250k	Yes	Yes	
HIGH	Development approach beyond 2026	Urbanisation of town centre, high density development with enhanced provision of services and high levels of accessibility and mode choice	>£50m	£500k-£1m	Yes	Yes	

#### PP11: Behavioural Change

This policy package is particularly well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was included in both the 'economic' and 'balanced' optimised scenarios. It is included in the Emerging Preferred Strategy as a policy package at the high level.

LOW	Car Club	Support for and promotion of car club	<£100k		Yes	Yes	Investigate feasibility overall and specific locations for car club with potential providers
	Car share	Support for and promotion of car sharing		<£100k	Yes	Yes	
	Travel planning	School travel planning, voluntary workplace travel planning, SWIFT forum		<£100k	Yes	Yes	
	Information provision	IT mapping and improvements	<£100k	<£100k	Yes	Yes	
MED	Increase home/remote working	Support opportunities to reduce the need to travel by allowing employees more flexible ways to work.	£1m-£2m		Yes	Yes	
PP1 MED cont/d	Health focussed travel awareness campaigns	Promotion of Active Travel as part of a healthy lifestyle PTP project through health partners.	<£100k	<£100k	Yes	Yes	
	Car Club	Small network of car club vehicles for	<£100k	<£100k	Yes	Yes	Investigate feasibility overall and specific

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility		
		Capital (approx)	Revenue (per annum)		Summary	Notes	
	employers and residents.					locations for car club with potential providers	
HIGH	Travel awareness campaigns	Large scale workplace and residential PTP projects (developer funded for new developments)	£100k-£250k		Yes	Yes	
	Travel planning	Workplace travel planning and large scale residential travel plans (all secured, enforced and monitored through S106 agreements)			Yes	Yes	
	Car Club	Extensive network of car club vehicles for employers and residents. Additional car clubs secured in new developments.		£250k-£500k	Yes	Yes	Investigate feasibility overall and specific locations for car club with potential providers

#### PP12: Low Emission Vehicles

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (not 'economic'). It is included in the Emerging Preferred Strategy as a policy package at the high level						
The take up of low emission vehicles, based largely on hybrid technology, is likely to be very important in reducing carbon emissions. Full introduction of an average car fleet of less than 100g/km by 2030 requires massive investment by car manufacturers and changed purchasing patterns from the public. The current best generations of new vehicles have emissions levels of around 100 g/km (the Toyota Prius emits 104 g/km). Encouraging market penetration is largely the remit of national and EU government; however local awareness campaigns and leadership through purchasing programmes can contribute to take up of low emission vehicles within Swindon.				Yes	Limited	Can be included at the high level – primarily through in principle support. Little expenditure is the direct the responsibility of SBC

#### PP13: Alternative Fuels

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (not 'economic'). It is included in the Emerging Preferred Strategy as a policy package at the high level						
Benefits can be obtained if alternative fuels are used in conjunction with petrol and diesel hybrids. There are many possible alternative fuels, including compressed natural gas, liquid petroleum gas, methanol, ethanol, biodiesel, hydrogen and electricity. Many can be used on their own; others can be blended with existing fuels and used in vehicles without any major modifications to the engines. The International Energy Agency optimistically suggest that, by 2030, some 20%-				Yes	Limited	Can be included at the high level – primarily through in principle support. Little expenditure is the direct the responsibility of SBC

Policy Package, Level & Initiative	Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
		Capital (approx)	Revenue (per annum)		Summary	Notes
	40% of all fuels in transport could come from alternative sources. More recent estimates have been much less optimistic, and 5% of fuels in transport might be more realistic by 2035. A major issue here is the transition, resource and infrastructure required to support mass market use of alternative fuels. Key initiatives come under national government remit, but local authorities could provide alternative fuel stations and public electric charging stations to support this transition.					

#### PP14: Slower Speeds and Ecological Driving

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (not 'economic'). It is included in the Emerging Preferred Strategy as a policy package at the medium/high level						
	Lower speeds need to be combined with awareness programmes and better ecological driving techniques to reduce fuel use. Ecological measures include driving at moderate speeds, avoiding excessive acceleration and harsh braking, changing gears at low engine revolutions, driving in the highest comfortable gear at any given speed, avoiding unnecessary use of in-car equipment (especially air conditioning), keeping tyres inflated and reducing unnecessary loads. Swindon Borough Council has the authority to set speeds on all roads except major highways and could provide leadership in terms of promotion of ecological driving.			Yes	Limited	Can be included at the medium or high level – primarily through in principle support. Some expenditure is the direct the responsibility of SBC (more than PP12 and PP13)

#### PP15: Freight

This policy package is reasonably well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, although was included only in the 'balanced' optimised scenario (not 'economic'). It is included in the Emerging Preferred Strategy as a policy package at the low level. There is some potential for elements of the medium or high level policy packages to provide							
LOW	Road based freight	Develop measures through the Wiltshire and Swindon FQP. Development of a route hierarchy for HGVs and non-HGV traffic through the Network Management Plan.	£1m-£2m		Yes	Yes	Linkages with PP7 and routeing/signing strategies present opportunity for synergies and cost sharing
	Behavioural Change	Work with the Road Haulage Association and other leading freight operators in the area to develop ways of improving efficiency of their fleet management and utilisation	£500k-£1m		Yes	Some	Direct costs to SBC are low, being mostly in principle support and consultation with industry
MED PP15	Road-based freight	Improve the provision of additional permanent lorry parking facilities within the Borough by identifying appropriate sites	£1m-£2m		Potential	Some	Not recommended as a specific policy element unless it can be linked with potential developments

Policy Package, Level & Initiative		Intervention / Element	Cost		Emerging Preferred Strategy	SBC involvement/responsibility	
			Capital (approx)	Revenue (per annum)		Summary	Notes
	Rail freight	within the Local Development Framework. Enhance the utilisation of the Rail freight terminal at South Marston for use by major manufacturers and other logistics operators in Swindon.	£1m-£2m		Possible	Limited	Support in principle, linked with development plans in the area
	Local Development Framework	Develop the Core Strategy and other associated policy documents to ensure that developments with high HGV movements are connected to appropriate road networks	£1m-£2m		Potential	Some	Linkage to PP10
HIGH	Consolidation Centres	As town centre regeneration gathers pace look to utilise an Urban consolidation centre.	£2m-£4m		No		In principle support for a private proposal

#### PP16: Long-distance Travel Substitution

This policy package is not well supported by analysis through INTRA-SIM and the wider initial appraisal of costs and deliverability, and as such was not included in the 'economic' or 'balanced' optimised scenarios, and is not explicitly included in the Emerging Preferred Strategy as a policy package at any specific level. However, some elements could be incorporated, particularly if linked to rail industry initiatives or directly related to developments							
LOW	Improve public transport links to long dist destinations	Marketing services/ timetables and offer fare discounts on long-distance coach services.	£500k-£1m		Potential	Limited	Linkages to information provision in other policy packages
MED	Improve public transport links to long dist destinations	Development of a Long-distance express coach network. Possible coachway station alongside the M4 motorway (between junctions 15-16) to provide faster journey times, as services would not need to divert from the strategic highway.	£2m-£4m		Possible	Limited	In principle support, but no active promotion- dependant on specific private proposals
HIGH	Improve public transport links to long dist destinations	Enhancements to the long-distance rail network, Improved public transport linkages to international and regional aviation hubs (Heathrow International Airport and Bristol International Airport),	>£50m		Possible	Limited	In principle support – dependant on rail industry initiatives





## 10 Targets and Indicators

*This Chapter identifies proposals for targets and indicators that will be used for monitoring the success of the Local Transport Plan in delivering the identified key local goals and priorities.*

10.1 Targets and indicators play a key role in the Local Transport Plan. They are designed to measure and monitor our progress towards meeting the LTP's objectives, highlight where we are doing well and show where we need to do things better. Indicators need to strike the right balance between being realistic but challenging, comprehensive but practical and cost effective to collect, analyse and report.

10.2 The indicators need to reflect local priorities as identified in the Sustainable Community Strategy, One Swindon and the emerging Core Strategy. They also need to reflect other plans and strategies covering health, the environment, social inclusion, economic growth and regeneration. As a result the indicators incorporate various transport elements as well as addressing the impact that transport has in other areas such as health, equality and the environment.

10.3 The targets must take account of the likely funding available to implement the measures set out in the Local Transport Plan. Funding for the early years of the Local Transport Plan will be severely constrained and following the Comprehensive Spending Review in autumn 2010 targets need to be realistic relative to the resources available. In view of the funding situation for this initial period of LTP3 the default position has been taken that targets should aim to maintain current performance ie the target is for no deterioration from previous levels. More stretching targets have been proposed for road safety and highway condition because, as local priority areas, they are receiving the majority of funding. Targets for indicators related to sustainable transport measures will be reviewed when the results of the bid to the Local Sustainable Transport Fund are known. If the bid is successful and funding is obtained for these areas, then stretching targets will be set for relevant indicators.

10.4 It is anticipated that the Local Transport indicators and targets will match any transport related indicators and targets that will be agreed as part of the emerging work on "One Swindon". Indicators will also be co-ordinated with those in the emerging Core Strategy. The new national road safety strategy to be launched in spring 2011 may also have an impact on local authority road safety targets. As a result of these potential influences on the LTP this section will be refreshed in autumn 2011 to incorporate any necessary revisions.

10.5 The previous system of National Indicators which were reported to central government each year as part of the Corporate Performance

Assessment (CPA) process has now ended and local government has greater freedom to decide on its own indicators and targets.

10.6 It is however, proposed, for continuity reasons, to retain most of the previous National Indicators that have a direct link to transport, and some that have an indirect link to transport. A number of additional indicators will be monitored relating to highway condition and to areas which are important to monitor but did not fall within the scope of the National Indicators.

10.7 The indicators are (with the previous National Indicator number included) set out in the table below. Progress will be monitored as part of the Local Transport Plan process. Where a previous National Indicator is used then the previous methodology for collecting and reporting these indicators will be retained. The other indicators were either former Best Value Performance Indicators or were monitored in LTP2 – and the previous methodologies will be retained.

<b>Transport Indicator</b>	<b>NI Number</b>
People killed or seriously injured in road traffic accidents	NI47
Children killed or seriously injured in road traffic accidents	NI48
Number of people injured in road traffic accidents whose injuries recorded as slight	
Average journey time per mile during the morning peak	NI167
Principal roads where maintenance should be considered	NI168
Non principal roads where maintenance should be considered	NI169
Unclassified Road Condition: Percentage of unclassified roads where maintenance should be considered	
Primary Footway Condition: Percentage of Primary Footways (Class 1, 1a & 2) in Unsatisfactory Condition	
Percentage of principal roads with skidding resistance below investigatory level	
Access to services and facilities by public transport, walking and cycling	NI175
Working Age people with access to employment by public transport (and other specified modes)	NI176
Local bus passenger journeys originating in the authority area	NI177
Bus services running on time	NI178
Children travelling to school – mode of travel usually used	NI198
Number of Cycling Trips	
Mode share of journey to work	

10.8 In addition to the core transport indicators there are indicators which are not transport specific but where transport is a key ingredient in successful delivery. These are as follows -

<b>Other Indicator</b>	<b>NI Number</b>
Obesity in primary school age children in year 6	NI56

Per Capita CO2 emissions in the Local Authority area	NI186
Adapting to climate change	NI188

10.9 Progress on these indicators will also be monitored as part of the Local Transport Plan process.

10.10 Targets have been set for five years unless otherwise stated. Targets will be reviewed towards the end of the five year period before setting further targets for the next five year period. In view of current uncertainties over the economy, public finance, the national policy framework and priorities and other social and technological trends it is not currently considered realistic to set targets for a longer period.

### **Road Safety Targets**

10.11 There are three targets related to road safety –

- People killed or seriously injured in road traffic accidents (was NI47)
- Children killed or seriously injured in road traffic accidents (was NI48)
- Number of people whose injuries recorded as slight

10.12 These indicators and targets are provisional as in January 2011 the Government announced that a new national road safety strategy would be published in spring 2011. Indicators and targets may need to be revised depending on the contents of the national strategy.

10.13 In the meantime these indicators and targets are based on those suggested the Department for Transport document “A Safer Way” published in April 2009 which were recommended to local transport authorities when preparing their Local Transport Plans.

10.14 The child casualty indicator has now been altered, nationally, to include those up to the age of 17 years (rather than up to 15 years).

10.15 These targets contribute to the following –

#### **DaSTS Goals**

- Better safety, security and health

#### **Community Strategy Themes**

- A healthy caring and supportive community
- A place where local people can have real influence and where they feel safe.

#### **One Swindon themes**

- I like where I live

10.16 To deliver these goals the targets involve reducing the number of road casualties across the area.

10.17 The Local Transport Plan will use the national targets to reduce the number of people killed or seriously injured (KSIs) in road traffic accidents by 33% and to reduce child KSIs (up to 17yrs of age) by 50% by 2020 from a baseline of the 2004-8 average.

<b>Number of People Killed or Seriously Injured</b>							
Year	2004-8 Baseline	2011	2012	2013	2014	2015 target	2020 target
All KSI	74.6						50

<b>Number of Children (up to 17yrs) Killed or Seriously Injured</b>							
Year	2004-8 Baseline	2011	2012	2013	2014	2015 target	2020 target
Child KSI	12.6						6.3

10.18 No national targets have been set for slight casualties. A local target has therefore been agreed. The target for reduction in slight injuries will also be set at 33% by 2020 from the 2004-8 average.

<b>Number of people whose injuries recorded as slight</b>							
Year	2004-8 Baseline	2011	2012	2013	2014	2015 target	2020 target
All Slight casualties							

Risks associated with meeting these targets

Risks	Mitigation
Delays to introduction of safety schemes due to lack of public agreement	Project Managers will ensure that public consultation is included early in any proposals and engage community at early stage
High number of casualties on roads outside the control of Swindon Borough Council	Work with the Highways Agency and Police through the Wiltshire and Swindon Road Safety Partnership on initiatives on the strategic road network.
Casualties continue despite implementation of schemes	Balanced approach to include education, publicity and training as well as engineering schemes
Small figures liable to significant fluctuation	Use a three year rolling average in order to smooth extreme years results
Uncertain impact of extending child KSI target up to age 17 years	Analysis of historic accident data for the extended age group in order to determine appropriate measures.
Reduced funding results in reduced programme of measures	Casualty reduction to score highly in value for money prioritisation of schemes. Measures to ensure money is being spent in most effective way.

10.19 In January 2011 the Government announced that it would be publishing a new strategic framework for road safety in spring 2011. As a result it is likely that the Council will need to carry out a review and refresh of its own road safety strategy and will update the content of LTP3 as appropriate.

### **Congestion Target**

10.20 The target related to congestion is

- Average journey time per mile during the morning peak (was NI167)

10.21 The data is supplied by the Department for Transport. It measures the average journey time per mile on the road network in Swindon during the morning peak period. Data is calculated from vehicles equipped with global positioning system monitoring devices.

10.22 While performance will be a reflection of the prevailing economic conditions it is likely that in the longer term, with significant regeneration and growth forecast for Swindon, it will be a challenge to maintain peak vehicle speeds at existing levels. The aim, therefore, is to achieve no deterioration in journey time per mile in the morning peak period during the LTP3 period.

10.23 This target contributes to the following –

#### DaSTS Goals

- Tackling climate change
- Supporting economic competitiveness and growth
- Improve quality of life

#### Community Strategy Themes

- A national icon for growth on a sustainable basis
- The safeguarding of the environment for future generations

#### One Swindon themes

- We can all benefit from a growing economy and a better town centre
- I like where I live

10.24 To deliver these goals the target involves reducing congestion in the morning peak period, improving journey time reliability, reducing the impact of traffic and enhancing the journey experience.

<b>Average journey time per mile during the morning peak</b>						
Year	2008 Baseline	2011	2012	2013	2014	2015 Target
Trajectory	2m 17s	2 17	2 17	2 17	2 17	2m 17s

#### Risks associated with meeting this target

Risks	Mitigation
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Employment and housing land allocations fail to support non car modes	Work closely over Core Strategy land allocations to ensure appropriate land use planning framework
Attractiveness of public transport declines due to financial and other pressures	Work with the bus operators to maximise level of service and service quality.
Reduced funding results in reduced programme of measures	Measures to ensure money is being spent in most effective way.

10.25 In January 2011 the Government announced changes to the system of National Indicators. In removing the requirement to report on a number of indicators where the data is supplied on behalf of local authorities by the Department for Transport it appears likely that this data will no longer be collected. Details on the future of this data source are awaited and this section will be updated when the continuation of this data source is confirmed, or when an alternative indicator is agreed.

### **Asset Management Targets**

10.26 The targets related to road maintenance are

- Principal roads where maintenance should be considered (was NI168)
- Non principal roads where maintenance should be considered (was NI169)
- Unclassified Road Condition: Percentage of unclassified roads where maintenance should be considered
- Primary Footway Condition: Percentage of Primary Footways (Class 1, 1a & 2) in Unsatisfactory Condition
- Percentage of principal roads with skidding resistance below investigatory level

10.27 The impact of recent severe winter weather and pressures on maintenance funding mean that there are significant challenges in delivering improvements to the condition of the highway network. Data will be collected directly annually by the Borough Council as part of its assessment of local highway conditions.

10.28 These targets contribute to the following –

#### DaSTS Goals

- Supporting economic competitiveness and growth

#### Community Strategy Themes

- Maximise the benefits to all Swindon people from a growing local economy

#### One Swindon themes

- We can all benefit from a growing economy and a better town centre
- I like where I live

10.29 To deliver these goals the targets involve maintaining the highway network to ensure an optimum level of service for the community.

10.30 The baseline targets for road condition in LTP3 have been set by building on the condition trends for existing road condition indicators, and looking at the corresponding historical funding levels and predicted future funding levels. Previous years survey data has been re-processed with the current condition indicator Rules & Parameters so that the year-on-year results have a consistent measure (see tables 1 to 5)

10.31 The current Swindon Borough Council Highway Asset Management Plan identifies the estimated annual funding required for maintaining highway condition at current performance levels for the various road and footway types, referred to as 'steady-state' funding. Performance targets set for the individual financial years within the LTP3 period are based on the likely condition outcomes assuming continuation of historical funding levels, which is less than half of the estimated 'steady-state' funding requirement.

**Principal Road (A Class) Condition: Percentage of principal roads where maintenance should be considered**

10.32 This has historically been a national road condition indicator (NI 168 and previously BV223) required by central government. The condition data is collected annually by machine surveys (SCANNER) and the indicator result processed in the Borough's Pavement Management System (PMS).

10.33 There was an unexpected improvement in NI168 in 2009/10, which contradicted the general national road condition deterioration trend following the recent harsh winters. The LTP3 baseline target for 2011/12 of 3% is the anticipated outcome as condition returns to the expected deterioration trend curve.

10.34 For the period of LTP3 from 2011 to 2016 the target has been set below the anticipated trend of future accelerated deterioration, predicted due to the three recent harsh winters and the continuing funding shortfall against steady-state road condition maintenance requirements (see Table 1). The ultimate aim is to significantly slow the anticipated rate of deterioration to a final target of 8.8% which is well below the current predicted condition in 2016.

	NI 168 (RP9.01 Equivalent)					LTP3 Target				
Financial Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Result/Target	0.6	1.7	1.3	1.9	1.7	3	4.3	6.5	8	8.8

Table 1: Principal Road (A Class) Condition

**Non-Principal Road (B&C Class) Condition: Percentage of non-principal classified roads where maintenance should be considered**

10.35 This has historically been a national road condition indicator (NI 169 and previously BV224a) required by central government. The condition data is collected annually by SCANNER and the indicator result processed in the Borough's PMS.

10.36 The recent harsh winters have unexpectedly had limited impact on recent NI169 results. The baseline of 5% is the anticipated condition indicator result for 2011/12.

10.37 For the period of LTP3 from 2011 to 2016 the target has been set to achieve an increasing year-on-year improvement in road condition when compared against the anticipated trend of delayed accelerated deterioration (see Table 2). This deterioration is predicted due to the three recent harsh winters and the continuing funding shortfall against steady-state road condition maintenance requirements. The ultimate aim is to significantly slow the anticipated rate of deterioration to a final target of 9.2%, which is well below the predicted condition in 2016.

	NI 169 (RP9.01 Equivalent)					LTP3 Target				
Financial Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Result/Target	1.7	3.8	4.9	4.5	3.9	4.9	5.7	7.1	8.5	9.2

Table 2: Non-Principal Road (B&C Class) Condition

**Unclassified Road Condition: Percentage of unclassified roads where maintenance should be considered**

10.38 BV224b was a national road condition best value performance indicator required by central government up until 2007/08. Swindon Borough Council has continued to monitor this as a local indicator since then. The condition data is measured either by SCANNER or by Coarse Visual Inspection (CVI) surveys, and the indicator result processed in the Borough's PMS.

10.39 The majority of unclassified roads in the Borough are residential or access roads. This hierarchy of road would not generally be constructed or maintained to the standards of many of the heavily trafficked or higher speed classified roads. The freeze thaw cycles experienced regularly over the past three harsh winters have to date caused much more significant early deterioration than for the classified roads. The LTP3 baseline figure of 24% is the anticipated condition indicator result for 2011/12.

10.40 For the period of LTP3 from 2011 to 2016 the target has been set to slow the current significant rate of road condition deterioration, attributable to the three recent harsh winters and the continuing funding shortfall against steady-state road condition maintenance requirements (see Table 3). The

ultimate aim is to significantly slow the anticipated rate of deterioration to a final target 28.5%, which is well below the predicted condition in 2016.

	BV224b					LTP3 Target				
Financial Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Result/Target	4.8	8	13	19	TBC	24	26	27	28	28.5

Table 3: Unclassified Road Condition

**Primary Footway Condition: Percentage of Primary Footways (Class 1, 1a & 2) in Unsatisfactory Condition**

10.41 BVPI187 was a national footway condition best value performance indicator required by central government up until 2007/08. SBC have continued to monitor this as a local indicator since. The condition data is measured by Detailed Visual Inspections (DVI) and the indicator result processed in the Borough's PMS.

10.42 Footway condition can often be impacted on by routine maintenance operations and so the prediction of required levels of capital investment to manage BV187 performance has historically been difficult. The LTP3 baseline target is 5.5%, which would represent a slight improvement from the 2010/11 result. The aim is to manage this indicator at a similar low level throughout the period of LTP3, the challenge being the management of deterioration whilst receiving only partial 'steady-state' condition funding (see Table 4).

	BV187					LTP3 Target				
Financial Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Result/Target	10.3	4	4	2	6	5.5	5.75	6.0	6.25	6.5

Table 4: Principal Footway (Class 1,1a & 2) Condition

**Percentage of principal roads with skidding resistance below investigatory level**

10.43 This figure has not to date been a formal indicator. The results have historically been reported to the Department for Transport (DfT) as part of the Transport Statistics Bulletin, and to the South West Highways Service Improvement Group (SWHSIG) for their Annual Highways & Transport Performance Report. The raw data is collected annually by machine surveys (SCRIM) and processed in the Borough's PMS.

10.44 The measurement of skidding resistance levels by SCRIM is extremely variable by year, or even by season. The inclusion of this indicator within LTP3 is due to the high importance that the management of skid resistance is given in the Borough, but at the same time it is accepted there will be a need for careful interpretation of results in the reporting of this indicator.

10.45 The baseline of 15% is the anticipated indicator result for 2011/12 based on historical analysis. The aim is to manage this indicator at a similar low level throughout the period of LTP3, accepting a small annual increase in the indicator when considering the continuing funding shortfall compared with steady-state condition requirements (see Table 5).

						LTP3 Target				
Financial Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Result/Target						15	15.5	16	16.5	17

Table 5: SCRIM Deficiency (CSC) Percentage Deficient of Length Surveyed

#### Risks associated with meeting these targets

Risks	Mitigation
Further extreme weather causes further rapid deterioration of assets	Work to review specifications to be more resilient to extreme weather. Recognise that major maintenance is more cost effective than repeated patching in the event of repeated extreme weather events
Funds diverted into insurance claims rather than repairs	Maintain a rigorous inspection regime to reduce insurance liabilities.
Reduced funding results in reduced programme of measures	Recognise importance to economy of highway condition when setting out scheme prioritisation framework. Measures to ensure money is being spent in most effective way.

#### Accessibility Targets

10.46 The targets related to accessibility to services are

- Access to services and facilities by public transport, walking and cycling (was NI175)
- Working age people with access to employment by public transport (and other specified modes) (was NI176)

10.47 Data is derived from the use of the "Accession" computer software which calculates the accessibility of households to key local services and

facilities by public transport, walking and cycling. NI175 is calculated by the Borough Council. NI176 is supplied by central Government.

10.48 Accession can calculate how accessibility differs between car owning households and those household without access to a car. This gives an important indication of the quality of non car based travel facilities. Improvements in access to services and facilities are highly dependent on changes and enhancements to the public transport network. In the short term funding pressures may mean that improved bus services may not easily be delivered.

10.49 These indicators are also dependent on the availability of local provision of services and facilities. With an increasing tendency to centralise many facilities, especially in the public sector as a result of the need to save costs, it will be a challenge to maintain present levels of accessibility.

10.50 These targets contributes to the following –

#### DaSTS Goals

- Supporting economic competitiveness and growth
- Promote greater equality of opportunity

#### Community Strategy Themes

- Maximise the benefits to all Swindon people from a growing local economy

#### One Swindon themes

- We can all benefit from a growing economy and a better town centre
- Everyone is enjoying sports, leisure and cultural opportunities
- Living independently, protected from harm, leading healthy lives and making a positive contribution

10.51 To deliver these goals the targets involve improving access to key facilities and employment opportunities for all members of the community.

<b>Access to services and facilities by public transport, walking and cycling</b>						
Year	Baseline	2011	2012	2013	2014	2015 Target
Trajectory						

<b>Working Age people with access to employment by public transport (and other specified modes)</b>						
Year	Baseline	2011	2012	2013	2014	2015 Target
Trajectory						

#### Risks associated with meeting these targets

Risks	Mitigation
Employment and housing land allocations fail to support non car	Work closely over Core Strategy land allocations to ensure appropriate land

modes	use planning framework
Further centralisation of key public services to reduce provider costs	Work with partners to identify accessibility issues at an early stage in any centralisation projects
Attractiveness of public transport declines due to financial and other pressures	Work with the bus operators to maximise level of service and service quality.
Reduced funding results in reduced programme of measures to promote walking, cycling and public transport	Measures to ensure money is being spent in most effective way. Introduce improved value for money assessments in order to prioritise spending.

10.52 In January 2011 the Government announced changes to the system of National Indicators. In removing the requirement to report on a number of indicators where the data is supplied on behalf of local authorities by the Department for Transport it appears likely that this data will no longer be collected. Details on the future of this data source are awaited and this section will be updated when the continuation of this data source is confirmed, or when an alternative indicator is agreed.

### **Bus Targets**

10.53 The targets related to bus services are

- Local bus passenger journeys originating in the authority area (was NI177)
- Bus services running on time (was NI178)

10.54 Swindon has seen a number of years of sustained increases in bus patronage well above the national average. Whether that rate of increase can be sustained during the economic downturn is questionable.

10.55 Bus patronage data is supplied by the local bus operators. Bus punctuality data is collected by the Borough Council according to guidance issued by central Government. The target for Swindon aims to exceed the national target of 95% punctuality.

10.56 These targets contributes to the following –

#### **DaSTS Goals**

- Supporting economic competitiveness and growth
- Promote greater equality of opportunity

#### **Community Strategy Themes**

- Maximise the benefits to all Swindon people from a growing local economy
- Safeguarding of the environment for future generations.

#### **One Swindon themes**

- We can all benefit from a growing economy and a better town centre
- Everyone is enjoying sports, leisure and cultural opportunities
- Living independently, protected from harm, leading healthy lives and making a positive contribution

10.57 To deliver these goals the targets involve measures to improve the attractiveness of bus services and will involve close co-operation with the local bus operators. The 2009/10 baseline figure for punctuality is 99% - which exceeds the minimum standard of 95% required from bus operators by the licensing authority. It has been decided to aim to maintain this level of performance as the target.

<b>Local bus passenger journeys originating in the authority area</b>						
Year	2009/10 Baseline	2011/2	2012/3	2013/4	2014/5	2015/6 Target
Trajectory	12.5million	12.5	12.5	12.5	12.5	12.5

<b>Bus services running on time</b>						
Year	2009/10 Baseline	2011/2	2012/3	2013/4	2014/5	2015/6 Target
Trajectory	99%	99%	99%	99%	99%	99%

#### Risks associated with meeting these targets

Risks	Mitigation
Employment and housing land allocations fail to support non car modes	Work closely over Core Strategy land allocations to ensure appropriate land use planning framework
Higher bus tender prices make services unaffordable	Work with bus operators to identify ways to reduce operating costs eg by reducing delays caused by congestion
Increased congestion reduces bus service reliability	Identify locations and causes of delay on the bus network.
Attractiveness of public transport declines due to financial and other pressures	Work with the bus operators to maximise level of service and service quality.
Reduced funding results in reduced programme of measures to promote public transport	Measures to ensure money is being spent in most effective way. Introduce improved value for money assessments in order to prioritise spending.

#### School Travel Target

10.58 The target related to school travel is

- Children travelling to school – mode of travel usually used (was NI198)

10.59 As set out in Government guidance the target for this indicator has been set as the car mode share for journeys to school. The target will be monitored annually using the pupil level annual school census.

10.60 This targets contributes to the following –

**DaSTS Goals**

- Tackling climate change
- Better safety, security and health
- Improve quality of life

**Community Strategy Themes**

- Safeguarding of the environment for future generations.
- A place where local people can have real influence and where they feel safe

**One Swindon themes**

- I like where I live

10.61 To deliver these goals the target involves measures to improve the attractiveness of travel to school by means other than the car. The target aims to limit the percentage of children travelling to school by car to no more than the figure for 2009/10.

<b>Children travelling to school – mode of travel usually used – share of journeys by car</b>						
Year	2009/10 Baseline	2011/2	2012/3	2013/4	2014/5	2015/6 Target
Trajectory	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%

**Risks associated with meeting this target**

Risks	Mitigation
Increased parental choice results in reduced travel options	Work to schools to ensure prospective parents are aware of travel implications. Widen scope of School Travel Plans to address parental choice issues
Increased concerns regarding road safety around schools discourages walking and cycling	Programme of School Safety Zones to address concerns. Increase awareness raising campaigns for motorists.
Reduced funding results in reduced programme of measures	Recognise importance of school travel to peak period congestion when setting out scheme prioritisation framework. Measures to ensure money is being spent in most effective way. Increased links to other priorities eg health

**Cycling Indicator**

10.62 The indicator related to cycling is

- Number of Cycling Trips (Index)

10.63 This indicator is an annualised index arrived at from a range of cycle count sites across Swindon. This acts as a proxy for cycling trips across Swindon generally.

10.64 This indicator contributes to the following –

**DaSTS Goals**

- Tackling climate change
- Better safety, security and health
- Improve quality of life

**Community Strategy Themes**

- Safeguarding of the environment for future generations.
- A place where local people can have real influence and where they feel safe

**One Swindon themes**

- I like where I live

10.65 To deliver these goals the target involves measures to improve the attractiveness of cycling.

<b>Number of Cycling Trips</b>						
Year	Baseline	2011	2012	2013	2014	2015 Target
Trajectory						

**Risks associated with meeting this target**

Risks	Mitigation
Resistance to taking up cycling due to concerns over safety, weather, security etc	Programme of education and promotion to dispel myths. Schemes to enhance cyclists' safety.
Data is skewed by unusual weather or random events	Data collection periods spread through the year to smooth impact of exceptional events.
Reduced funding results in reduced programme of measures	Measures to ensure money is being spent in most effective way.

**Journey to work Target**

10.66 The indicator related to journeys to work is

- Mode share of journey to work

10.67 This indicator monitors the success of measures to reduce car dependency for journeys to work and promote alternative travel modes. The target uses data received from annual journey to work monitoring surveys carried out by employers with Travel Plans. We use our Travel Plan monitoring software “I-Trace” to ensure that standard survey templates and analysis methods are used across the sample of employers.

10.68 This indicator contributes to the following –

**DaSTS Goals**

- Tackling climate change
- Better safety, security and health
- Improve quality of life

**Community Strategy Themes**

- Safeguarding of the environment for future generations.
- A place where local people can have real influence and where they feel safe

**One Swindon themes**

- I like where I live

10.69 To deliver these goals the target involves measures to improve the attractiveness of travel to work by means other than the car.

<b>Mode share of journey to work</b>						
Year	2009/10 Baseline	2011/2	2012/3	2013/4	2014/5	2015/6 Target
Trajectory	27.7%	27.7%	27.7%	27.7%	27.7%	27.7%

Risks associated with meeting this target

Risks	Mitigation
Variation to sample as workplaces change	Be aware of changes to sample and assess impact on indicator.
Lack of co-operation from employers	Maintain good relationships with employers and explain benefits of workplace travel to the local economy and environment.
Reduced funding results in reduced programme of measures	Recognise importance to journey to work to peak time congestion when setting out scheme prioritisation framework. Measures to ensure money is being spent in most effective way.

**Indirect Indicators**

The Local Transport Plan includes a number of “indirect” indicators. These come from associated areas (such as health) where transport has an impact

on performance. These indicators act as a proxy for how the Local Transport Plan strategy is performing.

In addition indicators and targets will be included in the final One Swindon proposals and where appropriate these will be included in the Local Transport Plan monitoring programme.

Subject to confirmation at a refresh in autumn 2011 these indirect indicators are expected to include -

### Child Obesity target

10.70 The target related to child obesity is

- Obesity in primary school age children in year 6 (was NI56)

10.71 This targets contributes to the following –

#### DaSTS Goals

- Better safety, security and health
- Improve quality of life

#### Community Strategy Themes

- A healthy caring and supportive community.

#### One Swindon themes

- I like where I live
- Everyone is enjoying sports, leisure and cultural opportunities

10.72 To deliver these goals the target involves measures to reduce childhood obesity including increased physical activity through active travel such as walking and cycling to school.

<b>Obesity in primary school age children in year 6</b>						
Year	Baseline 2009/10	2011/2	2012/3	2013/4	2014/5	2015/6 Target
Trajectory						

#### Risks associated with meeting this target

Risks	Mitigation
Failure to engage with partners delivering this target	Form contacts through Healthy Schools Alliance and Active Swindon
Measures to promote walking and cycling to school fail to have an impact	Measures put in place to reinforce existing School Travel Plans. Nominate travel champion in each school. Intensive work on rotating basis across schools.
Reduced funding results in reduced programme of	Recognise importance of impact of obesity on longer term health when setting out scheme

measures	prioritisation framework. Measures to ensure money is being spent in most effective way.
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## CO2 Reductions Target

10.73 The target related to CO2 emissions is

- Per Capita CO2 emissions in the Local Authority area (was NI186)

10.74 This indicator covers the CO2 emissions from industry and commerce, domestic uses and road transport. The national target established by the Climate Change Act 2008 is to reduce CO2 emissions by 34% by 2020 from a baseline year of 2005. The UK Low Carbon Transition Plan published by DECC places a greater emphasis on domestic/industrial emissions than on transport and suggests a 14% reduction in CO2 emissions from road transport between 2008 and 2022 is realistic.

10.75 This targets contributes to the following –

### DaSTS Goals

- Tackling climate change
- Better safety, security and health
- Improve quality of life

### Community Strategy Themes

- Safeguarding of the environment for future generations.
- A place where local people can have real influence and where they feel safe

### One Swindon themes

- I like where I live

10.76 To deliver these goals the target involves measures to reduce overall CO2 emissions in the area.

Per Capita CO2 emissions in the Local Authority area						
Year	Baseline	2011/2	2012/3	2013/4	2014/5	2015/6 Target
Trajectory						

### Risks associated with meeting this target

Risks	Mitigation
Failure to engage with partners delivering this target	Form contacts through Sustainability lead officers to co-ordinate activity with other sectors.
Lack of high-level buy in within the Council	Senior lead officer/Member identified as champion.
Growth results in unrestrained increase in car traffic.	Through the Core Strategy key sustainable transport policies are embedded within the development

	process
National measures related to transport, fail to have the expected impact eg efficiency of vehicles, green fuels, electric charging points	Promote local action in these areas through Swindon based vehicle manufacturers, fleet operators and through the Council's own vehicle fleet
Reduced funding results in reduced programme of measures	Recognise importance of international obligations of reducing CO2. Ensure money is being spent in most effective way.

### Climate Change Adaptation Target

10.77 The target related to climate change adaptation is

- Adapting to climate change (was NI188)

10.78 Local authorities are to report their “preparedness” taking account of national guidance. To report on the level reached as follows

Level 0 – Baseline, scoping, project planning, engagement of community, service users and LSP partners, developing vision

Level 1 – comprehensive assessment, developed possible adaptation responses to transport policies and operations

Level 2 – effective adaptation responses identified

Level 3 – adaptation action plan developed

Level 4 - adaptation action plan implemented, monitoring set up

All authorities are aiming to reach Level 4

10.79 Swindon is working its way through the levels of “preparedness” for adapting to climate change. Swindon has currently reached level 1 and aims to achieve Level 2 by May 2011.

10.80 This targets contributes to the following –

#### DaSTS Goals

- Support economic competitiveness and growth
- Tackling climate change
- Better safety, security and health
- Improve quality of life

#### Community Strategy Themes

- A national icon for growth on a sustainable basis
- Safeguarding of the environment for future generations.
- A place where local people can have real influence and where they feel safe

#### One Swindon themes

- I like where I live

10.81 To deliver these goals the target involves preparations to adapt to the impact of climate change in the local area.

<b>Adapting to climate change</b>						
Year	Baseline 2010	2011	2012	2013	2014	2015 Target
Trajectory	1	2				

Risks associated with meeting this target

Risks	Mitigation
Failure to engage with partners delivering this target	Form contacts through Sustainability lead officers to co-ordinate activity with other sectors.
Lack of high-level buy in within the Council	Senior lead officer/Member identified as champion.
Reduced funding results in lack of progress	Recognise importance to economy of resilient transport network when setting out scheme prioritisation framework.

