


South Worcestershire Development Plan

Transport Background Paper

DRAFT

Document: 1 Version: 2

Worcestershire County Council

December 2012



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Document History

South Worcestershire Development Plan – Transport Background Paper

Worcestershire County Council

This document has been issued and amended as follows:

| Version | Date | Description | Created by | Verified by | Approved by |
|---------|----------|-------------|------------|-------------|-------------|
| 1 | 13/11/12 | Draft | CA | AB | |
| 2 | 5/12 | Final | CA | AB | |
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1 Introduction

1.1 Background

This Background Paper is intended to explain the approach taken by the South Worcestershire Development Plan (SWDP) to addressing transport issues.

The SWDP has been through a series of iterations. The current version is the Pre-Submission Draft. This is an evolution of the 2011 Preferred Options document and the 2012 Significant Changes (which amended parts of the 2011 document). Please note that where policy numbers are quoted in this document these refer to the Pre-Submission Draft, 26th November 2012 version of the SWDP unless otherwise stated.

Table 1.1 provides an overview of the document evolution.

Table 1.1 - Stages in the evolution of the SWDP

| Document | Date |
|---|---------------------------|
| South Worcestershire Development Plan - Pre Submission Draft | 26 th Nov 2012 |
| South Worcestershire Development Plan - Significant Changes Consultation | 2012 |
| South Worcestershire Development Plan - Preferred Options Consultation | 2011 |
| South Worcester Joint Core Strategy - Site Allocations and Parish Visioning | 2010 |
| South Worcester Joint Core Strategy - Strategic Sites | 2009 |
| South Worcester Joint Core Strategy - Preferred Options | 2008 |
| South Worcester Joint Core Strategy Core Strategy -Issues and Options | 2007 |

Each of these stages of plan production are supported by various other documents. The key associated documents referred to in this background paper are:

- The South Worcestershire Infrastructure Delivery Plan (SWIDP) - this document sets out the transport infrastructure required to support the development outlined in the SWDP and specifically supports Policy SWDP 7 on infrastructure.
- Integrated Appraisal (Sustainability Appraisal/Strategic Environmental Appraisal) - this high level assessment of the environmental implications of the SWDP has been undertaken at each stage of the plan making process.
- Various reports of public consultation activities.

1.2 SWDP overview

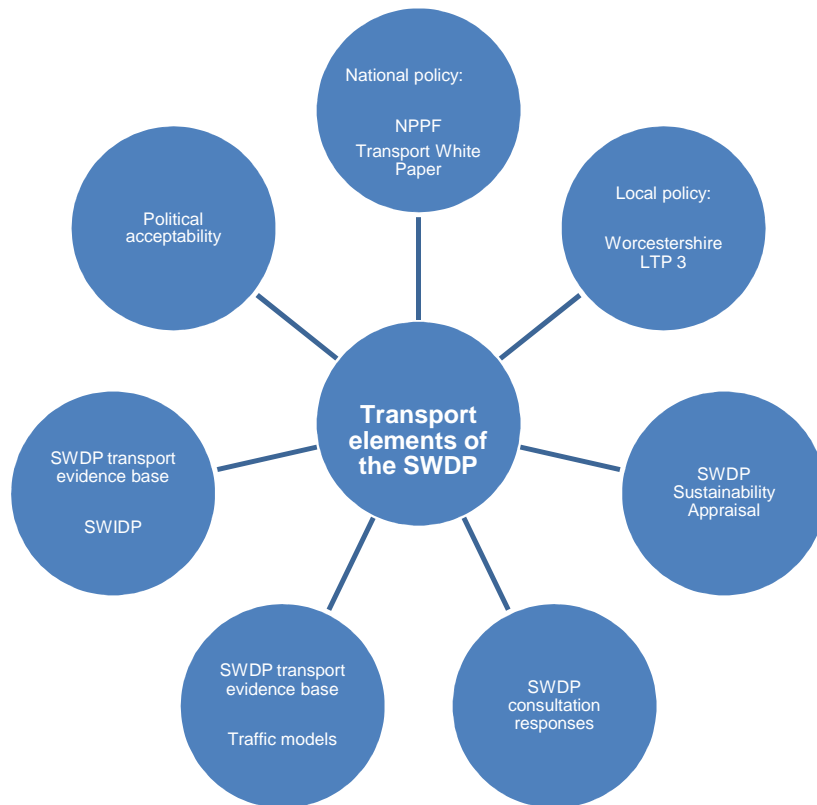
The SWDP sets out the proposals for long term development up until 2030 within South Worcestershire. The Pre-Submission Draft is planning for 23,530 homes and 301.91 hectares of employment land.

The Plan focuses the largest allocations for employment and housing at Worcester as the sub-regional focus for development. The majority of this development is to be delivered via urban extensions to the city (falling within the administrative areas of

Malvern Hills and Wychavon). Outside Worcester, the majority of development is to be focused within and adjacent (via further urban extensions) to the towns of Droitwich Spa, Evesham, Malvern and Pershore.

The current version of the SWDP has been influenced by a number of different factors. Figure 1.1 provides an overview of the key influences - these include national and local policy, technical work undertaken by Worcestershire County Council to develop a transport evidence base, consultation, sustainability appraisal and political factors.

Figure 1.1 - Influences on policy



1.3 Transport policies within the SWDP

In summary, the overarching approach to transport adopted by the SWDP is that:

- Consolidating mixed use development (housing and employment) in the existing urban areas, and via urban extensions at Worcester, Droitwich Spa, Malvern, Pershore and Evesham will help to ensure that the transport impacts of new development are manageable (albeit requiring investment in transport infrastructure, services and information). By clustering new development near to existing services (health, education, employment etc) and ensuring that new developments themselves provide a balance of homes, jobs and services it will help to reduce the distances that people need to travel. Importantly clustering development near existing urban areas means that there is likely to be greater opportunity to increase usage of existing public transport services, walk and cycle networks and make improvement to those services more viable. This is reflected in the reasoned justification to Policy SWDP 4 on page 48 of the Pre-Submission Draft document which emphasises the need to "...ensure the close integration of land use and transportation planning to manage demand on the local transport network." This approach is consistent with the National Planning Policy Framework (NPPF) which states (para 34) that "Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable modes can be maximised." The benefits of this approach were also recognised in the Sustainability Appraisal of the SWDP Preferred Options which stated (in para 6.14) that "Effects on travel and transport are uncertain in the short term, although directing development to areas with existing infrastructure and requiring sustainable transport options to be integral to new developmentwill potentially promote positive outcomes and effects in the medium to long term."
- Travel choice should be provided, in particular to ensure and promote sustainable travel patterns. This is a general policy direction, as set out in a number of policy documents.
- The transport network needs to support economic growth in a sustainable manner. This reflects the Government's overarching desire to support the economy whilst protecting our environment, as outlined in the Transport White Paper.
- There will be a need for targeted investment in the transport network (infrastructure and services) as set out in the SWIDP. This should address the cumulative impact of all of the development proposed in the SWDP (rather than be on a site by site basis). This reflects the statement in the NPPF that suggests that (para 32) "...development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."

The SWDP policies which crystallise this approach and to which this paper refers are (note that policy numbers refer to the latest Pre Submission version of the SWDP):

- SWDP 2 - Development Strategy and Settlement Hierarchy;

- SWDP 3 - Employment, Housing and Retail Supply;
- SWDP 4 - Moving around South Worcestershire. This is the key transport policy within the plan and the main focus of this background paper. Policy SWDP 4 is an evolution of Policy CS12 from the previous Joint Core Strategy. See below for more details of the specifics of Policy SWDP 4; and
- SWDP 7 - Infrastructure.

Policy SWDP 4, is reproduced in full below for reference. The text is taken from the Pre-Submission Draft, dated 26th November 2012. The appendices contain the wording of the policies from the Preferred Options and Significant Changes stages.

“Policy SWDP 4: Moving Around South Worcestershire

A - Managing Travel Demand

Proposals must demonstrate that the location of development will minimise demand for travel, offer genuinely sustainable travel choices, improve road safety and support the delivery of the Worcestershire Transport Plan objectives.

Travel Plans will be required for all major developments. These must set out measures to reduce the demand for travel by private cars and stimulate cycling, walking and public transport through agreed targets and monitoring arrangements.

(For residential uses major is defined as 10 units or more. For all non-residential uses, major is defined as exceeding 1,000 sq. m. (net) floorspace. The agreed targets within a Travel Plan will reflect the potential of the end use to offer realistic travel choices.)

New development should accord with the design criteria and principles set out in Manual for Streets, Worcestershire County Council’s Local Transport Plan 3 Highways Design Guide for new developments, the Design Guide Supplementary Planning Document and the Parking Standards in New Development Supplementary Planning Document.

B - Providing alternative modes of travel

Priority will be given to improving public and community transport provision, walking and cycling infrastructure during the plan period. All new developments will be expected to contribute to the provision of sustainable transport infrastructure either through direct investment in facilities or by financial contributions.

In order to promote more transport choice in rural areas, community transport and innovative transport projects, including those that promote the use of new vehicle technology, will be encouraged in conjunction with new development proposals.

All town centre development will need to show that the needs of alternative powered vehicle users have been considered.

C - Delivering transport infrastructure to support economic prosperity

The following major transport schemes, as identified within the Worcestershire Local Transport Plan 3, will be prioritised:

- 1. Worcester Transport Strategy Phase 1*
- 2. Worcestershire Parkway*

3. Evesham Abbey Bridge

4. Urban transport packages for the towns of Malvern, Tenbury Wells, Upton upon Severn, Pershore, Evesham and Droitwich Spa

Development proposals that are likely to prejudice the future development of these strategic transport schemes, or that have an adverse impact on existing or proposed public transport facilities and the implementation of identified highway improvements or traffic management schemes such as those along the A4440 (Southern Link) at Worcester, will not be permitted.

With respect to growth at Worcester, the highway authority has indicated that the Worcester Transport Strategy Phase 1 only addresses existing transportation needs at 2010 along with projected background growth for travel demand. The implementation of 9,400 dwellings and 117ha of employment land up to 2030 will therefore be dependent upon the development and satisfactory implementation of additional elements of the Local Transport Plan 3 Worcester Transport Strategy, including:

i. Partial dualling of the Southern Link Road

ii. Multi-modal enhancements on all the remaining key radial and orbital transport corridors in Worcester City

iii. Additional walk and cycle route enhancements

iv. Upgrade of Worcester Shrub Hill station and associated improvements to the local highway network

v. Smarter Choices (Choose How You Move) measures at all new developments (traffic generation increases by approximately 10% without these measures)

The following sites and corridors as shown on the Proposals Map will be safeguarded from any development that might prejudice future enhancements to the local and national rail network.

1. Worcestershire Parkway Station

2. Cotswolds and Malverns Line

3. Droitwich Spa to Stoke Works

4. Stratford to Cheltenham Line including the former Chord Lines at Honeybourne Junction.

D - Transport Assessment Strategy

Transport Assessments must be carried out to the requirements of Worcestershire County Council and as set out in the Local Transport Plan 3 and associated supporting policies and guidance including:

1. Local Transport Plan 3 Development Control (Transport) policy

2. Worcestershire County Council Guidance on Transport Assessments and Statements

3. Worcestershire County Council Highway Design Guide

4. Worcestershire County Council Sustainable Urban Extension Developments Transport Requirements

E - Car parking standards

Locally determined car parking standards will apply to all development proposals, which will be set out in Supplementary Planning Documents.

F - Implementation

Financial contributions from development towards strategic transport infrastructure will either be secured through the Community Infrastructure Levy charging schedule or the Developer Contributions Supplementary Planning Document as appropriate to the circumstances of the development. New development will need to be incorporated into a co-ordinated infrastructure and service delivery programme agreed with the south Worcestershire authorities and Worcestershire County Council. The Infrastructure Delivery Plan provides additional guidance about how this co-ordination will be achieved. Where appropriate site-specific transport improvements may be sought through s.106 or other agreements in accordance with Worcestershire County Council's Design Guidance."

1.4 Role and status of this document

This document is part of a suite of documents which together provide the policy context and justification for the SWDP.

- Provides a **reasoned justification** for the transport aspects of the SWDP (specifically Policy SWDP 4, but also referencing the transport implications of other policies as appropriate) explaining how these are consistent with key relevant national policy (including the National Planning Policy Framework NPPF) and local policy (including Worcestershire's Third Local Transport Plan).
- Outlines the evidence base that was developed to help **assess** the transport impacts of the proposals contained within the SWDP **Preferred Options** (2011) and **Significant Changes** (2012).
- Provides an overview of the transport elements of the South Worcestershire **Infrastructure Delivery Plan** (IDP)
- Explains how the Integrated **Sustainability Appraisal** (SA) and Strategic Environmental Assessment (SEA) has influenced the development of transport aspects of the SWDP.
- Explains how the various stages of **consultation** have influenced the development of transport aspects of the SWDP policies.

2 Consistency with Policy

2.1 Policy overview

The SWDP as a whole must be consistent with national planning policy. Recent substantial changes to the planning system have helped to streamline planning guidance, hence the key national document with which the SWDP must comply is the National Planning Policy Framework (NPPF).

In terms of transport policy the policy context is provided by:

- The Government's White Paper on Transport - 'Creating Growth, Cutting Carbon' published by the Department for Transport in 2011; and
- The Third Worcestershire Transport Plan (and supporting documents), adopted in 2011.

This Chapter provides a justification for why the transport aspects of the SWDP are consistent with these policy documents. At the end of the Chapter Table 2.1 provides a summary of the key consistencies with policy.

2.2 National Planning Policy Framework (NPPF)

The NPPF sets out four main requirements for Local Plans (para 182). It states that they should be:

- **"Positively prepared** – the plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development."

The land use proposals set out in Policy SWDP 3 have been tested using specialist transport and traffic modelling tools to ensure that their transport impacts are understood and can realistically be mitigated. The modelling tools have allowed an objective assessment of the infrastructure required to facilitate the development set out in the SWDP - these needs are reflected in the new policy SWDP 7.

- **"Justified** – the plan should be the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence"

Policy SWDP 3 has evolved based on consideration of a range of alternative locational strategies. By focussing development in or adjacent to the existing urban area the SWDP aims to create sustainable patterns of development. The transport work confirms that the strategy proposed can be appropriately managed in transport terms.

It should be noted however that the transport work undertaken in support of the SWDP has not explicitly tested alternative locational strategies. Instead the work undertaken by Worcestershire County Council has been based on the pattern of development proposed in the various versions of the emerging plan.

The assessment of the transport impacts of the SWDP has identified the transport infrastructure and services (for all modes) that will be required to ensure that the impacts of additional development can be appropriately managed. The transport work

undertaken by Worcestershire County Council has been based upon 2011 and 2012 versions of the SWDP.

- **“Effective** – the plan should be deliverable over its period and based on effective joint working on cross-boundary strategic priorities.”

The transport work undertaken identifies the infrastructure and services required to support the level of growth proposed by the SWDP and helps to confirm that (assuming appropriate funding can be secured) the proposals are deliverable.

- **“Consistent with national policy** – the plan should enable the delivery of sustainable development in accordance with the policies in the Framework.”

The transport aspects of the SWDP are consistent with the NPPF and the DfTs Transport White Paper. Latter sections of this document provide further detail.

The NPPF states, in para 32, that “Plans and decisions should take account of whether...improvements can be undertaken within the transport network that can effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.”

This statement has had a large bearing on the approach that Worcestershire County Council has taken to the development of its evidence base in support of the SWDP. The approach that the Council has taken to developing the SWDP Vehicle/Trip Generation Model which has been used as a transport impact assessment tool (as discussed in Chapter 3) has focussed on being able to consider the cumulative impact of the proposed SWDP development scenario on the wider transport network. That is, it has sought to consider the impacts and implications of the proposed development allocations in combination and beyond the immediate area of the development, but within South Worcestershire.

The need to “Actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.” is one of the core planning principles advocated by the NPPF (para 17). In several places the NPPF refers to the importance of locating development in areas where the need to travel can be minimised and the opportunities to support sustainable travel are greatest. For example,

- Para 30 states that “...in preparing Local Plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.”
- Para 34 goes on to say that “Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. “
- Para 37 states that “Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.”
- Para 38 emphasises that “For larger scale residential developments in particular, planning policies should promote a mix of uses in order to provide opportunities to undertake day-to-day activities including work on site.”

Policy SWDP 3 has these principles at its heart. By focussing development in or adjacent to the existing urban area the SWDP aims to create sustainable patterns of development. New development will provide a mix of land uses and will be located close to existing services and facilities. This will ultimately help to reduce the need to travel. The strategy of focussing development in/close to established urban areas also means that there are opportunities both to make use of existing public transport networks and walk/cycle routes and also to improve upon and extend these in the future, consistent with the measures set out in the SWIDP.

A future core principle emphasised by the NPPF is the need to “Support the transition to a low carbon future in a changing climate...” (para 17). Sustainable transport modes are emphasised throughout the NPPF. Para 29 states that “the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel.”

Para 35 goes on to state that “Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to:

- accommodate the efficient delivery of goods and supplies;
- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- consider the needs of people with disabilities by all modes of transport.”

Policy SWDP 4 addresses these requirements specifically. It has a clear focus on sustainable modes and promoting travel choice. It emphasises that proposals should “...offer genuine sustainable travel choices...”

The location strategy set out in Policy SWDP 3 contributes to lower carbon by promoting containment and local trips, whilst Policy SWDP 4 explicitly promotes travel choice and sustainable modes of transport.

The importance of preparing Transport Assessments and Travel Plans to ensure that the transport impacts of development and the opportunities to promote sustainable transport are understood is noted by the NPPF (for example in paras 32 and 36)

Policy SWDP 4 contains specific requirements for the preparation of both Travel Plans and Transport Assessments.

The NPPF is clear in its requirement that Local Authorities should “plan positively to support local development” (para 16). It encourages Local Authorities to respond to the development needs of its area, including identifying needs for improved transport infrastructure. One of the core principles set out in para 17 is to “Proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs.” In relation to transport, para 162 builds on this by going on to say

that “Local planning authorities should work with other authorities and providers to: assess the quality and capacity of infrastructure for transport,and its ability to meet forecast demands...”

The SWDP is consistent with the requirement to plan positively for the infrastructure required to support development. The statements included in the Pre-Submission Draft version of the SWDP in order to safeguard sites and corridors from development that might prejudice transport enhancements are an example of positive planning. Furthermore, by identifying and targeting the investment required to tackle the parts of the transport network that will become over capacity once the development proposed by the SWDP is in place, the SWDP is also being proactive in supporting development.

The issue of parking is dealt with specifically in the NPPF. Para 39 states that “If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- the accessibility of the development;
- the type, mix and use of development;
- the availability of and opportunities for public transport;
- local car ownership levels; and
- an overall need to reduce the use of high-emission vehicles.”

Para 40 goes on to say that “Local authorities should seek to improve the quality of parking in town centres so that it is convenient, safe and secure, including appropriate provision for motorcycles. They should set appropriate parking charges that do not undermine the vitality of town centres. Parking enforcement should be proportionate.”

The Pre Submission Draft SWDP states that parking standards will be set out in a Supplementary Planning Document. These will take account of the issues outlined in Para 39 of the NPPF.

Paragraph 41 of the NPPF Local planning authorities should identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice.

Policy SWDP responds to this by safeguarding a number of sites and corridors that might prejudice further enhancements to the local and national rail network. Similarly it states that developments which might prejudice the priority Local Transport Plan schemes will not be permitted.

2.3 Transport White Paper

The Transport White Paper, Creating Growth, Cutting Carbon, published by the DfT in January 2011 sets out the Governments vision for “a transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in.” At its heart is the premise that “By improving the links that move goods and people around, and by targeting investment in new projects that promote green growth, we can help to build the balanced, dynamic low carbon economy that is essential for our future prosperity.”

The SWDP supports Worcestershire's LTP3 and prioritises the schemes identified in the LTP. The LTP itself is clear in recognising the vital link between transport and the economy and includes an objective "To support Worcestershire's economic competitiveness and growth through delivering a reliable and efficient transport network." The SWDP also recognises that the Worcestershire Local Enterprise Partnership has key priorities to deliver transport infrastructure required to secure economic growth and create better access for the Counties strategic businesses.

The White Paper explains the Governments desire to reduce emissions at the local level principally by encouraging people to make more sustainable travel choices for shorter journeys. This White Paper is about providing the early reduction in carbon emissions that local action is best placed to deliver, while facilitating the access to local jobs that will boost economic growth.

The White Paper recognises that targeting investment in transport will be essential for future prosperity. However it is clear in saying that "...investment on its own is not enough – we also need to help people to make transport choices that are good for society as a whole."

This principle is reflected in Policy SWDP 4 by an overarching requirement that "Proposals must demonstrate that the location for development will minimise demand for travel (and) offer genuine sustainable travel choices...."

The concept of enabling choice is central to the White Paper. It states that the Government does "...not want to eliminate or restrict choice – our goal is to enable and encourage more healthy and sustainable choices – choices that enable local growth." The White Paper asserts that it is at the local level that most can be done to enable people to make more sustainable transport choices and to enable the mainstream use of more genuinely sustainable transport modes – environmentally as well as fiscally, economically and socially sustainable.

Policy SWDP 4 reflects this message by both prioritising investment in major transport schemes and focussing on the need to offer genuine travel choices. Elements of policy SWDP 4 that set out a clear requirement for Travel Plans and require new developments to contribute to the provision of sustainable transport infrastructure are consistent with the message in the White Paper about promoting travel choice.

The White Paper is supportive of community transport initiatives, particularly given the Governments wider Localism agenda. It recognises that community transport can offer a lifeline, particularly to people living in rural areas.

Policy SWDP 4 supports community transport projects and is therefore consistent with this element of the White Paper.

The White Paper recognises that "Congestion on the strategic infrastructure has a major economic and environmental cost, and is a significant challenge to the objectives of growing and rebalancing our economy, while ensuring carbon emissions fall in line with our obligations."

By identifying and targeting the multi-modal transport infrastructure investments required to support its development aspirations (via the SWIDP) the SWDP is consistent with this part of the White Paper.

In relation to rail the White Paper states that “We also need to reduce the carbon impact of longer journeys – and here we see that rail...has a critical role to play. By prioritising spending on key rail projects ...we will be providing commuters and intercity travellers with attractive new options instead of the car.”

Policy SWDP 4 identified Worcestershire Parkway as a regionally important rail project providing improved access both to direct Worcestershire – London & South East services and Cross-Country services operating along the Birmingham – Bristol/South Wales axis. In this respect is consistent with the White Paper. The inclusion of text within Policy SWDP 4 at the Pre-Submission Draft Stage to safeguard rail sites and corridors is a further example of supporting the development of rail.

2.4 Worcestershire Local Transport Plan LTP3

Worcestershire’s Third Local Transport Plan (LTP3) sets out transport policies and strategies for Worcestershire from 2011 to 2026. The following paragraphs demonstrate how the SWDP is consistent with LTP3.

The LTP is based upon a series of high level objectives which are supported by local LTP aims. The key objectives and associated aims relevant to the SWDP are set out below:

- **The economic objective** - To support Worcestershire's economic competitiveness and growth through delivering a reliable and efficient transport network.
 - *Policy SWDP 4 prioritises a series of major transport schemes (as identified in the LTP itself) which will help to improve the reliability and efficiency of the transport network and support local economic competitiveness.*
- **The environment objective** - To reduce the impacts of transport in Worcestershire on the local environment, by reducing noise and transport - related emissions of carbon dioxide and other greenhouse gases, with the desired outcomes of tackling climate change and reducing the impacts of transport on public health.
 - *The overall location strategy set out in SWDP 3 will help to ensure that the impact of new development is minimised - locating new development close to existing urban areas will help to reduce the need to travel.*
 - *Policy SWDP 4 requires proposals to demonstrate how the location will minimise demand for travel, and offer sustainable travel choices. It also requires Travel Plans and expects developments to contribute to sustainable travel infrastructure and services. The result of these measures will be to reduce the impact of transport noise and reduce the impact of transport on communities.*
- **The health and safety objective** - To contribute towards better safety, security, health and longer life expectancy in Worcestershire, by reducing the risk of death, injury or illness arising from transport and promoting healthy modes of travel.
 - *Policy SWDP 4 states that proposals must demonstrate that the location for development will improve road safety, whilst supporting active modes of travel.*

The LTP identifies three major schemes in the South Worcestershire area. These are:

- **Worcester Transport Strategy** - this involves the delivery of an integrated package of inter-related transport measures specifically developed to support the performance of the economy and improve the local environment. The strategy will begin the process of significant enhancement of Worcester's transport network across all modes of transport, to encourage economic growth, an improved environment and social wellbeing. Phase 1 of the strategy is currently subject of a Major Scheme Funding Bid to the Department for Transport and has achieved Programme Entry, with the Full Approval submission currently being considered.
- The **Worcestershire Parkway** Major Scheme- involves the development of a new parkway station at the intersection of the Bristol to Birmingham/North West/North East and the Worcester - London (Cotswolds Line) main line railways. This station would provide significantly improved direct access to national (inter-city express) rail services from Worcestershire, and provide significant opportunities for local economic growth.
- **Evesham Abbey Bridge** - this involves the complete replacement of the Abbey Bridge in Evesham and the viaduct which approaches it. This scheme will maintain, and potentially improve accessibility into Evesham Town Centre.

In addition, urban transport packages are identified for Malvern, Tenbury Wells, Upon-on-Severn, Pershore and Droitwich Spa.

Policy SWDP 4 prioritises the delivery of these major schemes, and is therefore in line with LTP 3.

The LTP is supported by a number of appendices. Of most relevance to the SWDP is the **Development Control (Transport) Policy**. This provides the strategic framework to support the delivery of new developments which are sustainable in terms of their impact on the performance, viability and transport-related environmental effects of Worcestershire's network of transport infrastructure and services. It contains a number of specific policies including:

- Policies DC 1 and 2 - which are focussed on ensuring new developments are sustainable. *Policy SWDP 4 reflects this requirement in requiring that proposals demonstrate that they will minimise travel demand and offer sustainable travel choices.*
- Policy DC4 which focussed on making best use of existing transport infrastructure - and highlights the importance of locating new development on existing walk, cycle and public transport routes. *Policy SWDP 4 does not explicitly make this reference but picks up these issues in its requirement for proposals to demonstrate travel choice and support the delivery of the LTP objectives.*
- Policy DC6 on the development of a transport evidence base (Transport Assessment) *SWDP 4 includes reference to Transport Assessments.*
- Policy DC 8 on developer contributions - this seeks to ensure that appropriate levels of financial contribution are secured from developers towards the cost of transport infrastructure to mitigate the impact of their developments on the transport network and includes reference to the Community Infrastructure

Levy (CIL). *Policy SWDP 4 (Pre-Submission Draft) is consistent with this as it specifically states that "Financial contributions from development towards strategic transport infrastructure will either be secured through the Community Infrastructure Levy charging schedule or the Developer Contributions Supplementary Planning Document as appropriate to the circumstances of the development."*

- Policy DC10 which requires new developments to produce effective Travel Plans. *Policy SWDP 4 directly mirrors this requirement.*

LTP 3 explains that Transport Schemes will be prioritised if they can be shown to be beneficial to the local and regional economy, by supporting and enhancing economic activity. Transport schemes that deliver benefits well in excess of their development costs will be prioritised, as this will ensure that optimum value for money is achieved.

It will be essential that the true costs, deliverability implications and risks associated with proposed transport schemes are properly understood before schemes are promoted for delivery. Any proposed transport schemes must be justified by evidence, to support the case for investment and ensure that they are affordable to the taxpayer.

2.5 Summary of consistency with key policies

Table 2.1 provides a summary of the extent to which each element of Policy SWDP 4 is consistent with key policies at the National and Local policy. Overall, this shows that Policy SWDP 4 is well grounded in policy.

| Table 2.1 - Consistency of SWDP4 with key policy | | | |
|---|---|--|---|
| Policy SWDP 4 (wording from Pre-Submission Draft, 26th November 2012) | NPPF | Transport White Paper | LTP 3 |
| Proposals must demonstrate that the location for development will minimise demand for travel, offer genuine sustainable travel choices, improve road safety and support the delivery of Local Transport Plan objectives. | <p>Para 17 which sets out core principles of the land use planning system which includes the need to “Actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable”</p> <p>Para 35 - “Plans should protect and exploit opportunities for the use of sustainable transport modes”</p> | <p>Executive summary - Our vision is for a transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in our communities.</p> <p>Page 34 - The Government wants to encourage and enable more sustainable transport choices.</p> | <p>New developments must be designed and located to minimise the impact on the transport network, such that journey times, reliability and transport costs do not deteriorate (and adversely impact economic performance).</p> <p>To contribute towards better safety, security, health and longer life expectancy in Worcestershire, by reducing the risk of death, injury or illness arising from transport and promoting healthy modes of travel.</p> <p>Linked policy under the economic aim “Increase travel choice and promote modal shift towards walking, cycling and passenger transport, particularly in the busiest /most used transport corridors and congested urban areas. (See the Smarter Choices Policy)</p> |
| Travel Plans will be required for major developments. These must set out measures to reduce the demand for travel by private cars and stimulate cycling, walking and public transport through agreed targets and monitoring arrangements. | <p>Para 17 - as above</p> <p>Para 36 states that “All developments which generate significant amounts of movement should be required to provide a Travel Plan.”</p> | | <p>New development must have in place adequately funded and managed Travel Plans which support the delivery of sustainable development and support the economy through ensuring the efficient operation of the transport network (see the Development Control (Transport) Policy)</p> <p>Policy DC10 in Development Control (transport) Annex</p> |

| Table 2.1 - Consistency of SWDP4 with key policy | | | |
|---|---|------------------------------|--|
| Policy SWDP 4 (wording from Pre-Submission Draft, 26th November 2012) | NPPF | Transport White Paper | LTP 3 |
| New developments should accord with the design criteria and principles set out in Manual for Streets, Worcestershire County Council's Highways Design Guide for new developments and the Design Guide Supplementary Planning Document and the Parking Standards in New Development Supplementary Planning Document. | Para 57 - " It is important to plan positively for the achievement of high quality and inclusive design for all development, including individual buildings, public and private spaces and wider area development schemes. | | |
| Providing alternative modes of travel Priority will be given to improving public and community transport provision, walking and cycling infrastructure during the plan period. | Para 17 - as above Para 35 - "Plans should protect and exploit opportunities for the use of sustainable transport modes" | | |
| All new developments will be expected to contribute to the provision of sustainable transport infrastructure either through direct investment in facilities or by financial contributions. | | | Ensure that promoters of new developments identify and contribute appropriately toward the cost of, the on and off-site transport infrastructure and services required to deliver accessible and Sustainable new developments. Policy DC8 from Development Control Transport Policy Annex to LTP3 |
| In order to promote more transport choice in rural areas, community transport and innovative transport projects, including those that promote the use of new vehicle technology, will be encouraged in conjunction with new development proposals. | Para 29 " Smarter use of technologies can reduce the need to travel." Para 29 "...The Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas." | | |
| All town centre development will need to show that the needs of alternative powered vehicle users have been considered. | Para 35 - "...developments should be located and designed where practical to...incorporate facilities for charging plug-in and other ultra-low emission vehicles" | | Promote the provision of facilitative charging infrastructure for electric vehicles (Transport and Climate Change Policy and Transport and Air Quality Policy) |

| Table 2.1 - Consistency of SWDP4 with key policy | | | |
|--|---|-----------------------|---|
| Policy SWDP 4 (wording from Pre-Submission Draft, 26 th November 2012) | NPPF | Transport White Paper | LTP 3 |
| <p>Delivering transport infrastructure to support economic prosperity</p> <p>The following major transport schemes, as identified within the Worcestershire Local Transport Plan 3 will be prioritised:</p> <p>Worcester Transport Strategy Phase 1 Worcestershire Parkway Evesham Abbey Bridge New transport packages for the towns of Malvern, Tenbury Wells, Upton-upon-Severn, Pershore, Evesham and Droitwich Spa.</p> <p>Development proposals which are likely to prejudice the future development of these strategic transport schemes; or have an adverse impact on existing or proposed public transport facilities and the implementation of identified highway improvements or traffic management schemes such as those along the A4440 (Southern Link) at Worcester, will not be permitted.</p> <p>With respect to growth at Worcester the highway authority has indicated that the Worcester Transport Strategy Phase 1 only addresses existing transportation needs at 2010 along with projected background growth on traffic demand. The implementation of 9400 dwellings and 117 hectares of employment land up to 2030 will therefore be dependant upon the development and satisfactory implementation of Local Transport Plan 3 Worcester Transport Strategy including:</p> | <p>Para 156 states that “Local planning authorities should set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver.....the provision of infrastructure for transport”</p> <p>Para 157 goes on to say that Local Plans should...plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of this Framework.”</p> | | <p>All these schemes are specifically noted in LTP 3.</p> <p>LTP3 also includes a linked policy under the economic aim to “Promote further rail parkway stationsto maximise the amount of workers and visitors (including shoppers and tourists) that can access Worcestershire's constrained urban areas without increasing congestion and journey times and thereby controlling transport costs and supporting improved economic performance (see the Traffic Management and Parking Policy)</p> |

| Table 2.1 - Consistency of SWDP4 with key policy | | | |
|---|---|---|---|
| Policy SWDP 4 (wording from Pre-Submission Draft, 26th November 2012) | NPPF | Transport White Paper | LTP 3 |
| <ol style="list-style-type: none"> 1) Partial dualling of the Southern Link Road 2) Multi-modal enhancements on all the remaining key radial and orbital transport corridors in Worcester City 3) Additional walk and cycle route enhancements 4) Upgrade at Worcester Shrub Hill station and associated improvements to the local highway network 5) Smarter Choices (Choose How You Move) measures at all new developments. | | | |
| <p>The following sites and corridors as shown on the Proposals Map will be safeguarded from any development that might prejudice future enhancements to the local and national rail network</p> <ol style="list-style-type: none"> 1) Worcestershire Parkway Station 2) Cotswolds and Malvern Line 3) Droitwich Spa to Stoke Works 4) Stratford to Cheltenham Line including the former Chord Lines at Honeybourne Junction. <p>(Note that this is a new paragraph - added at the Pre-Submission Draft stage)</p> | <p>Para 41 “Local planning authorities should identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice.”</p> | <p>“We also need to reduce the carbon impact of longer journeys – and here we see that rail....has a critical role to play. By prioritising spending on key rail projects ...we will be providing commuters and intercity travellers with attractive new options instead of the car.”</p> | <p>The LTP supports and priorities these schemes.</p> |
| <p>Transport Assessment Transport Assessments must be carried out to the requirements of Worcestershire County Council and as set out in the Local Transport Plan 3 and associated supporting policies and guidance including:</p> | <p>Para 32 - All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether: - the opportunities for sustainable</p> | | <p>Policy DC6 from the Development Control (transport) Annex to LTP 3</p> |

| Table 2.1 - Consistency of SWDP4 with key policy | | | |
|---|--|------------------------------|---|
| Policy SWDP 4 (wording from Pre-Submission Draft, 26th November 2012) | NPPF | Transport White Paper | LTP 3 |
| 1) Local Transport Plan 3 - Development Control (Transport) policy 2) Worcestershire County Council Guidance on Transport Assessments and Statements 3) Worcestershire County Council Highway Design Guide 4) Worcestershire County Council Sustainable Urban Extensions developments Transport Requirements. | transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure; - safe and suitable access to the site can be achieved for all people; and • improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe. | | |
| Car parking standards Locally determined car parking standards will apply to all development proposals, which will be set out in Supplementary Planning Documents. | The SPG on Parking Standards will take account of para 39 of the NPPF which states that “If setting local parking standards for residential and non-residential development, local planning authorities should take into account: - the accessibility of the development; - the type, mix and use of development; - the availability of and opportunities for public transport; - local car ownership levels; and - an overall need to reduce the use of high-emission vehicles.” | | |
| Implementation Financial contributions from development towards strategic transport infrastructure will either be secured through the Community Infrastructure Levy charging schedule or the Developer Contributions Supplementary Planning Document as appropriate to the circumstances of the development. New development will need to be incorporated | Para 175 “...Community Infrastructure Levy Charges should be worked up and tested alongside the Local Plan.” Para 204 “Planning obligations should only be sought where they meet all of the following tests: • necessary to make the development acceptable in planning terms; • directly related to the development; and | | Policy DC8 - Development Control Transport) Annex to the LTP3 |

| Table 2.1 - Consistency of SWDP4 with key policy | | | |
|---|--|------------------------------|--------------|
| Policy SWDP 4 (wording from Pre-Submission Draft, 26th November 2012) | NPPF | Transport White Paper | LTP 3 |
| <p>into a co-ordinated infrastructure and service delivery programme agreed with the South Worcestershire authorities and Worcestershire County Council. The Infrastructure Delivery Plan provides additional guidance about how this co-ordination will be achieved. Where appropriate site-specific transport improvements may be sought through s 106, or other agreements in accordance with Worcestershire County Council's Design Guidance.</p> | <ul style="list-style-type: none"> • fairly and reasonably related in scale and kind to the development.” | | |

3 Transport Assessment of the SWDP

3.1 Introduction

In order to assess the transport implications of the level of development proposed through the SWDP, a programme of transport planning and traffic modelling work has been ongoing. A Vehicle/Trip Generation Model has helped to:

- Support Policy SWDP 3 - it has shown that the overriding principle of directing new development towards the edge of the existing urban areas can work in transport terms. That is, it can be accommodated through the existing network albeit supported by specific identified transport infrastructure and services improvements.
- Inform policy SWDP 4 - in terms of quantifying the overall impact of the increase in demand to travel, thereby setting a context for transport policy and pointing towards the key investments and initiatives that will be required in order to support new development; and
- Inform the development of the Infrastructure Development Plan (SWIDP) - which identifies the types of transport improvements that will be required to help support the development proposed within the SWDP.

3.2 Key stages of work

The transport planning and traffic modelling work undertaken in support of the SWDP has been ongoing since 2009. This work all forms part of the evidence base in support of the SWDP.

The first key stage of work was the use of the Worcester Transport Model (WTM), which was developed to support the development of the Worcester Transport Strategy (WTS) and the 2010 Worcester Transport Strategy Major Scheme Bid submission to the DfT. This model, a detailed 4-stage multi-modal variable demand model, was developed to help identify the nature of transport improvements required to both address existing issues in Worcester and support the further development of the City. The results of this work were reflected in the WTS. The WTS is supported and prioritised by both the LTP and the SWDP (Policy SWDP 4). Concurrent testing of the SWDP land-use assumptions was undertaken using accessibility analysis (with use of the Worcestershire Accession Model) to understand accessibility of SWDP sites by walking, cycling and passenger transport, and also the WCC development modelling tools for Malvern, Evesham, Pershore and Droitwich Spa were used to understand the impact on highway network junctions in these areas.

Following on from the WTM, accessibility and town development models (Droitwich Spa, Evesham, Pershore, Malvern), a second stage of modelling was undertaken in 2012 to assess the cumulative impact of the SWDP development on the transport network in the South Worcestershire area. This required the commissioning of a further modelling tool to allow the testing of the cumulative impact of development proposals contained within the SWDP Preferred Options (and latterly the Significant Changes) in terms of demand generated by vehicles, walking, cycling and passenger transport. This tool is known as the SWDP Vehicle/Trip Generation Model. This

model was designed to cover both local and network wide impacts of the development proposals. The main output of this phase of work was a list of the locations on the highway network which would become over capacity once the SWDP development was in place.

The model was also used to assess travel demand by non-car modes and (in conjunction with the previous accessibility assessment) was used to identify the walk, cycle and passenger transport infrastructure and service enhancements needed to support the emerging SWDP. A series of mitigating schemes were identified and cost estimates (capital and ongoing maintenance) prepared. This work fed directly into the development of the SWIDP. This is discussed in detail in the next Chapter.

The remainder of this Chapter deals specifically with the SWDP Vehicle/Trip Generation Model, and the way in which this latest phase of transport planning work has helped to give confidence that the proposals set out in the current version of the SWDP are appropriate.

3.3 The SWDP Vehicle/Trip Generation model - an overview

The SWDP Vehicle/Trip Generation Model (a spreadsheet based, strategic gravity model) enables:

- The calculation of the numbers of trips that each proposed development site will generate;
- An assessment of the way in which those trips will route on the network; and
- The ability to sum the trips to establish an overall cumulative impact assessment.

The model was developed using standard data sources about the amount and types of trips likely to be generated by each of the sites proposed in the SWDP. These assumptions covered all modes and therefore included walk, cycle and public transport, as well as trips made by car.

The modelling tool covers the AM and PM peak periods and also provides public transport, walking and cycling data for a 24 hour period. It concentrates on the SWDP area, but recognises key destinations for travel beyond South Worcestershire. It focuses on the main 'A' roads and key 'B' class roads in the area.

The model allows comparisons to be made between:

- The **existing situation** - the model simulates current conditions on the transport network. This is based 2010 year; and
- The **predicted future situation** once all the development proposed by the SWDP is in place - the model simulates the conditions that would be expected on the transport network in 2030.

A key premise of the transport work undertaken in support of the SWDP is to recognise that the quantum of development proposed in South Worcestershire will not only have a local transport impact (adjacent to the individual sites promoted through the SWDP) but also an impact on the strategic transport network further afield. The model thus provides a tool to **assess the cumulative impact** of additional

trips on the highway network resulting from trips to and from the SWDP development sites on a network wide basis. In doing so it seeks to reflect the importance that the NPPF places on understanding cumulative impact (para 32).

It is important to note that the SWDP Vehicle/Trip Generation Model is a spreadsheet based model. It is not a full multi-routeing assignment model. This means that route choice in the model is based on a number of assumptions and manual assignments of trips. The model thus allows a comprehensive assessment of the potential impact of traffic on the wider network arising from new development. It does not, though, allow the consideration of the impact of congestion on subsequent route choice across the network (i.e. it is not an iterative model). It should be noted, however, that this approach is consistent with a traditional development related transport assessment, albeit at a strategic level.

Two phases of modelling work were undertaken using the SWDP Vehicle/Trip Generation Model.

- Phase 1 (completed in April 2012) - was based on housing and employment numbers provided by the South Worcestershire Planning Authorities (Worcester City, Wychavon and Malvern Hills) in February 2012. These numbers provided by the planning authorities reflected the development proposals set out in the SWDP Preferred Options; and
- Phase 2 (completed in November 2012) - was based on housing and employment numbers provided by the South Worcestershire Planning Authorities in September 2012. These numbers provided by the planning authorities reflected the development proposals set out in the proposed SWDP Significant Changes.

It should be noted that the model essentially tested a "full" SWDP development scenario (i.e. for 2030). The assessment does take account of the difference between background traffic growth and that generated by SWDP planned development.

In each phase, the SWDP Vehicle/Trip Generation Model was used to identify a list of highway links and junctions which were anticipated to be operating at levels at or above capacity in the future (once the development proposed in the SWDP is in place) as a result of additional trips on the network.

This list of 'problem locations' was used as basis for the identification of schemes required to mitigate these impacts and ensure that development can go ahead without creating adverse impact. These schemes (and the full methodology employed to identify them) is detailed in the SWIDP.

3.4 Phase 1

The first phase of SWDP modelling was undertaken between November 2011 and April 2012. Table 3.1 shows the development assumptions that were entered into the traffic model. The housing and employment numbers modelled during this phase were provided by the South Worcestershire Planning Authorities and relate broadly to those outlined in the SWDP Preferred Options.

Table 3.1 - Housing and employment assumptions in the made in the traffic model

| Phase/date of traffic modelling | Allocations | | Completions | | TOTAL | |
|-----------------------------------|---------------------|-----------------------|---------------------------------|-----------------------------------|---------------------|-----------------------|
| | Residential (homes) | Employment (hectares) | Residential Completions (homes) | Employment Completions (hectares) | Residential (homes) | Employment (hectares) |
| Phase 1 Nov 11 - Feb-12 | 17,197 | 223.25 | 3,749 | 55.69 | 20,946 | 278.94 |
| Phase 2 Sep-12 - Nov 12 | 19,679 | 271.07 | 3,957 | 52 | 23,636 | 323.29 |

3.5 Phase 2

In September 2012 the SWDP Vehicle/Trip Generation Model was updated. The development assumptions are highlighted above in Table 3.1 - these numbers were provided by the South Worcestershire Planning Authorities and reflect the direction of the amendments proposed in the Significant Changes.

The model was amended to reflect the changes to housing and employment numbers and the trips in the model were updated accordingly. The changes to policy SWDP 4 itself did not necessitate any amendment to the model. The changes made to the model (compared to the November 2011 - February 2012 model) included:

- Residential Development: +2,690 residential units
- Employment Development: +44Ha (Total Gross Area)
- Updated figures for housing and employment development Windfalls and Commitments
- The inclusion of C3 release development sites

This phase of modelling used the same methodology and gravity model functionality as the 2011 development assumptions. The functionality of the model was updated to incorporate updated WebTag Guidance which was published in June 2012. The output of the revised model was therefore an updated list of pinch points. The overall conclusion of the revised modelling work was that the impact of the Significant Changes would not be significantly different from the Preferred Options.

It is forecast that the latest version of the SWDP (i.e. the SWDP Preferred Options) will generate the following additional demand for travel on the South Worcestershire transport network:

- Total Trips (across 24 hour period): 668,000 person trips (all modes)
- Vehicle Trips (AM peak period): 24,300 vehicle trips
- Vehicle Trips (PM peak period): 25,300 vehicle trips

Each of the proposed developments sites will have an inevitable impact both on the immediate local network and importantly, will lead to a cumulative impact on the wider/strategic network which will need to be mitigated.

Given the quantum of development proposed the modelling results show that, in some areas, the existing transport network will cope reasonably well. That is, the new trips generated will be absorbed without undue impacts on capacity on some areas of the transport network. Elsewhere, in particular in and around Worcester City, along sections of key inter-urban corridors and in some other urban areas, measures will be needed to accommodate the growth in travel demand.

The evidence has identified that targeted investment in transport infrastructure and services (across all modes) will need to be delivered to enable the transport network to accommodate the SWDP generated growth in demand without undermining the performance of the network.

This suggests that the benefits of the locational strategy set out in Policy SWDP 3 are that there is significant opportunity:

- For the use of sustainable modes (opportunity to make use of existing public transport services and greater ability to provide 'cost neutral' public transport); and
- For short, local trips (trip containment) - due to close proximity of new development to education, employment, services and leisure.

This leads to:

- A manageable impact on the strategic network which in turn helps to maintain journey time reliability for the movement of freight and business trips (helping to support continued economic growth); and
- Limited need for major infrastructure in the rural area.

However, the levels of development outlined in Table 3.1 will inevitably impact adversely on some parts of the network, in particular in and around Worcester, along sections of the key inter-urban corridors and at key locations in some South Worcestershire towns.

In terms of traffic conditions in and around Worcester:

- In comparison with the current situation there will an additional 7,000 vehicle trips (+17.5%) trying to use the Worcester network during both the AM and PM peak periods.
- Overcapacity queues across the network will grow significantly, increasing fourfold during the AM peak period and fivefold during the PM peak period.
- Total travel time will grow by nearly 38% across both peak periods, consistent with significantly more congestion and delay which will result in an increase in the travel costs imposed on businesses, transport operators and other network users.
- Journey distances travelled are forecast to increase by 15% across the peak periods. This reflects the increased congestion and will result in the re-routing

of traffic onto local and less appropriate roads. This will result in adverse impacts in terms of safety, the environment and the attractiveness of sustainable modes for local journeys such as walk, cycle and passenger transport (both for local and longer distance journeys).

This reflects a transport network which, without mitigation, will perform extremely poorly in future years. The impacts will not be restricted to the road network as the congestion on strategic roads, such as the A4440 Southern and Eastern Bypasses, will result in reassignment of traffic onto local and less appropriate roads, which in turn will lead to a deterioration in the attractiveness of walk, cycle and local passenger transport (bus) modes.

Outside of Worcester the transport network impacts tend to be localised and focussed more specifically on junctions. Notwithstanding this, there will be additional delays imposed on businesses and other network users resulting from increased congestion and delays at key pinch points.

The main highway corridors on which congestion problems were identified in the future year scenario (with SWDP development) include the following:

- Worcester Eastern Bypass (A4440)
- Worcester Southern Bypass (A4440)
- Radial routes in and out of Worcester (including London Road, Bromyard Road, Bath Road, Newtown Road, Ombersley Road, Droitwich Road & Barbourne Road)
- A38 Worcester – Droitwich Spa
- A38 – Droitwich Spa Bypass
- A4538 – East of Worcester
- A44 – Worcester – Pershore – Evesham
- A46 – Evesham Bypass
- A449 – Worcester – Great Malvern
- A449 Claines – M5 Junction 6

If no scheme (highway and other modes) were provided at the problem areas and specific locations, pinch-points would be created on the network, increasing journey times and imposing costs on users, businesses and transport operators. This could also result in people diverting to other less appropriate routes to avoid the pinch point thereby incurring additional mileage and delay. Alternative routes may also be to a lower road standard resulting in environmental and safety impacts an ultimately resulting in a need for additional local mitigation measures to be provided. An efficient primary road network is also important for the economy, a key consideration locally and nationally. It is therefore important that pinch points on the network are overcome through the implementation of mitigating schemes. The SWIDP identifies these schemes - see next Chapter for more details.

Further information on the transport assessment of the SWDP is provided in the following documents:

- Section 4 of the SWIDP
- The relevant sections of Appendix Y of the SWIDP.

3.6 Overall findings

The modelling work shows that in order to support the proposals outlined in the SWDP there is definite need for investment to tackle pinch points on the transport network, improve passenger transport infrastructure and services and improve walk and cycle infrastructure. The delivery of the schemes outlined in the SWIDP, and discussed in the next Chapter, will be essential in order to retain the necessary level of access and movement to maintain economic activity.

4 Transport Elements of the South Worcestershire Infrastructure Delivery Plan (SWIDP)

4.1 Purpose of the SWIDP

The Transport SWIDP is an important part of the supporting material for the SWDP. It is a detailed document which sets out the infrastructure that will be required in order to support and facilitate the development proposed by the SWDP.

The SWIDP identifies a scheme for each of the locations on the transport network which were predicted by the SWDP Vehicle/Trip Generation Model to become under significant pressure once the SWDP development is in place. It, therefore, provides a comprehensive list of the transport infrastructure and service improvements required to support the SWDP.

4.2 Identification of schemes

The development of the SWIDP has followed on directly from the transport assessment work described above. For each of the locations identified as being over capacity in the SWDP Vehicle/Trip Generation Model the SWIDP has sought to identify a mitigating scheme. For each over capacity link the SWIDP identifies:

- whether a scheme is currently being progressed to alleviate the problems (for example through an existing Transport Package); or
- where no scheme has yet been identified, the type of scheme that would be needed to alleviate the problem and whether this could be designed in such a way to be technically and economically feasible.

In this context, scheme proposals identified through the WTS have been taken as the core schemes for Worcester and schemes identified through the 'Development Traffic Impact Assessment' work has been used as a basis for the towns. Where additional issues have been identified in both Worcester and the four main towns, and for areas not previously covered, the Vehicle/Trip Generation Model described in Chapter 3 has been used to identify further locations where mitigation is required to overcome or reduce the impact of proposed development. That is, there are locations outside Worcester that do not currently have the benefit of an existing package of measures identified through the LTP strategy. Furthermore, there are some development sites that were not considered at the time the LTP strategy was developed. For these sites, an additional task has been undertaken to identify schemes and other mitigation measures. These proposed schemes have been identified through the use of the SWDP Vehicle/Trip Generation Model described in Chapter 3.

The SWIDP identifies both highway schemes and sustainable transport infrastructure schemes. They consider all modes of transport and in broad terms include proposals for the following types of improvements:

- Local passenger transport (services and infrastructure);
- Rail stations and interchange facilities;
- Highway improvements and junctions enhancements; and

- Pedestrian and cycle schemes.

The proposed highway infrastructure schemes aim to improve capacity at the key junctions which are anticipated to incur additional delays in future years as a result of the housing and employment growth proposed for the SWDP area.

The proposed sustainable transport infrastructure schemes aim to connect the proposed SWDP development sites to the existing transport network and, where appropriate, improve the existing transport network to encourage greater use of more sustainable transport modes. The lists of mitigation schemes therefore also include measures to improve the pedestrian and cycle networks, and address locations where the efficient operation of local passenger transport services can be overcome through schemes to allow buses to operate as effectively as possible. These schemes have been identified through consideration of the results of the Vehicle/Trip Generation Model to determine where additional infrastructure is required to complete the sustainable transport network to support trips by sustainable modes to and from these development sites.

Small and larger scale schemes have been included in the SWIDP, addressing safety issues as well as positively providing a network of routes to access employment and services. This is in accordance with the policy aims of creating a more sustainable transport network. It is noted that where measures are introduced to primarily address a highway movement issue, any new measures will also consider their contribution to the cycle and walk network. Thus, it is likely that there will be an improvement to safety for cyclists and pedestrians as a result of the introduction of improvements to junctions on the highway network.

The provision of local passenger transport infrastructure is important to maintaining the attractiveness of this mode of transport. There is a need for a careful balance between providing new infrastructure for car based and local passenger transport services. Also, in order to provide a network of minimum standard bus services, there is likely to be a need to provide infrastructure (bus stops, Real Time Information, etc.) as well as funding to ensure that a minimum frequency is attained.

The different characteristics of locations within the SWDP area have been taken into consideration when identifying schemes. That is, though there is always an emphasis on the provision of sustainable alternatives, there is also an acknowledgement that the measure identified needs to be appropriate for the journey being made and location of the start point. Thus, in Worcester there has been an emphasis on the provision of sustainable transport alternatives to address the forecast increases in traffic and congestion as a result of increased demand for travel. In the towns a balanced approach has been adopted, identifying both highway and more sustainable measures. In the rural areas, whilst the use of sustainable modes is to be encouraged, it is acknowledged that highway capacity issues also need to be addressed to enable both car and bus trips to use the network efficiently.

Policy SWDP 4 supports the prioritisation of the Worcester Transport Strategy (including the current Phase 1 schemes), Evesham Abbey Bridge and urban transport packages for Malvern, Pershore, Evesham and Droitwich Spa. The results of the modelling work show that all of these are important elements of an overall transport investment package and that all are required to mitigate the impacts of the future proposed levels of development. The transport model did not include Worcestershire

Parkway - hence the model itself does not provide a justification for this priority scheme. However, the wider strategic benefits of an additional station are recognised and the scheme has been the subject of a separate business case assessment (meeting rail industry and Department for Transport requirements) which shows a strong economic and financial case for the proposed station. The transport model does not highlight a specific case for the need for urban transport packages for Tenbury Wells or Upton-on-Severn. These towns are not significantly affected by the development proposed in the SWDP.

The identified schemes represent the "best" solution in terms of resolving capacity issues identified in the model. The model has not specifically tested the performance of the network with all the development and the schemes in place. However, the work undertaken gives confidence that the capacity problems created as a result of additional development could be overcome.

4.3 Cost implications of the SWDP

For each of the identified schemes a cost has been estimated. Costs include construction costs, relevant percentage uplifts to account for scheme preparation and development costs over and above the basic construction and materials and "optimism bias" (reflective of the stage of development of scheme designs). An estimate is also made of the maintenance costs of the schemes over a 30 year period.

A breakdown of the costs for the proposed transport schemes on a mode-by-mode and town-by-town basis is provided in Table 4.1 below. Where schemes fall outside the towns the cumulative costs are shown in the interurban/rural table.

Please note that these costs include those associated with the Highways Agency Trunk Road network. Worcestershire County Council and the Highways Agency have been working closely together on transport issues and have shared data where appropriate.

Table 4.1: SWDP IDP Transport Schemes – Highway and Walk, Cycle and Passenger Transport

| Category | Project | SWDP Policy | Delivery Partners | Estimated Construction Cost (£millions) | Potential Sources of Funding | Estimated Timescale | Costs/Funding/Delivery Notes | Further Details |
|---|---|-----------------|--|---|---|--|------------------------------|-----------------|
| <i>A. Movement (costs exclude any land acquisition and CPO costs (in the event that these are required), passenger transport operating costs and local s278 highways works)</i> | | | | | | | | |
| Worcester (Worcester Transport Strategy) | | | | | | | | |
| HIGHWAY SCHEMES | A4440/Southern Link Road capacity Enhancements, Key Corridors, traffic signals enhancements. NOTE. Excludes costs for M5 junctions 5, 6 and 7 which are within the jurisdiction of the Highways Agency. | SWDP 4 & SWDP 7 | Worcestershire CC, Developers, Highways Agency | £106.2 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106 & s278), New Homes Bonus, +other funding sources as available | 2012-2020: (1) Dualling A4440 (Whittington-Ketch) (2) Key Corridors linking urban extensions with City Centre (3) Shrub Hill Opportunity Zone transport infrastructure works 2020-2030: (1) Further Enhancements to A4440 and remaining key corridors | | |
| RAIL SCHEMES | Foregate Street Station improvements (in addition to those funded through WTSMBSB), Shrub Hill Station Improvements & Worcestershire Parkway | SWDP 4 & SWDP 7 | | £22.1 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), Network Rail, Train operating Companies, DfT +other funding sources as available | 2012-2020: (1) Foregate Street (2) Worcestershire Parkway (3) Shrub Hill Station (if Opportunity Zone development proposals advanced for delivery in this period) 2020 - 2030: (1) Shrub Hill (if delivery of Opportunity Zone development delayed) | | |
| LOCAL PASSENGER TRANSPORT SCHEMES | Including: Bus stop infrastructure, Real Time Information systems (incl. SVD & links to signals operations) and other PT elements of Key Corridors schemes | SWDP 4 & SWDP 7 | | £22.0 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012 - 2020 and 2020 - 2030) aligned with key Corridor improvements and delivery of SWDP planned growth (in particular the urban extensions) | | |
| WALK & CYCLE SCHEMES | New and improved walk and cycle routes, additional walk and cycle bridge to north of city (and associated access links) and walk & cycle elements of key Corridor schemes | SWDP 4 & SWDP 7 | | £11.5 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012 - 2020 and 2020 - 2030) aligned with key Corridor improvements and delivery of SWDP planned growth (in particular the urban extensions) | | |
| TOTAL | | | | £161.8 | | | | |
| Droitwich | | | | | | | | |
| HIGHWAY SCHEMES | Local highway network improvements including A38 highway enhancements in vicinity of Droitwich. | SWDP 4 & SWDP 7 | | £3.4 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| RAIL, LOCAL PASSENGER TRANSPORT AND WALK & CYCLE LINK SCHEMES | Including: (1) Provision of Infrastructure to enable local PT services to access & serve SWDP development sites. (2) Improvements to Droitwich rail station and associated interchange facilities (including parking, information, access routes etc.). (3) Provision of walk & cycle footbridges over A38 linking proposed development sites to town centre. (4) Improvements to canal towpath. | SWDP 4 & SWDP 7 | | £4.1 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £7.5 | | | | |
| Evesham | | | | | | | | |
| HIGHWAY SCHEMES | Including town centre junction enhancements. NOTE: Excludes A46 schemes which are within the jurisdiction of the Highway Agency. | SWDP 4 & SWDP 7 | | £0.9 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| RAIL, LOCAL PASSENGER TRANSPORT AND WALK & CYCLE LINK SCHEMES | Including: (1) Provision of Infrastructure to enable local PT services to access & serve SWDP development sites. (2) Improvements to Evesham rail station and associated interchange facilities (including cycle parking, information, access routes etc.). (3) Provision of walk & cycle footbridges over A46 and River Avon linking proposed development sites to town centre, railway station, retail parks and employment centres. (4) Improvements to walking and cycling connectivity (5) Improvements to town centre walking and cycling facilities | SWDP 4 & SWDP 7 | | £6.1 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £6.9 | | | | |
| Malvern | | | | | | | | |

| | | | | | | | | |
|--|--|-----------------|--|-----------------|---|--|--|--|
| HIGHWAY SCHEMES | Local highway network improvements NOTE: See Inter-Urban Highway section (below) for A449 highway enhancements in north-east Malvern. | SWDP 4 & SWDP 7 | | £5.0 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| | | | | | | | | |
| RAIL, LOCAL PASSENGER TRANSPORT AND WALK & CYCLE LINK SCHEMES | Including: (1) Provision of Infrastructure to enable local PT services to access & serve SWDP development sites, and further improvements to Malvern Link station (2) Improvements to walking and cycling connectivity (3) Information kiosks (4) Improvements to town centre walking and cycling facilities | SWDP 4 & SWDP 7 | | £0.6 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £5.6 | | | | |
| Pershore | | | | | | | | |
| HIGHWAY SCHEMES | Local highway network improvements NOTE: See Inter-Urban Highway section (below) for A44 highway enhancements. | SWDP 4 & SWDP 7 | | £0.8 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| RAIL, LOCAL PASSENGER TRANSPORT AND WALK & CYCLE LINK SCHEMES | Including: (1) Provision of Infrastructure to enable local PT services to access & serve SWDP development sites. (2) Improvements to Pershore rail station and associated interchange facilities (including cycle parking, information, access routes etc.). (3) Improvements to walking and cycling connectivity (4) Improvements to town centre walking and cycling facilities | SWDP 4 & SWDP 7 | | £2.9 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £3.8 | | | | |
| Rural Malvern Hills | | | | | | | | |
| LOCAL PASSENGER TRANSPORT AND WALK & CYCLE LINK SCHEMES | Including: (1) Provision of Infrastructure to enable local PT services to access & serve SWDP development sites. (2) Improvements to walking and cycling connectivity to the existing network (3) Improvements to walking and cycling facilities and infrastructure | SWDP 4 & SWDP 7 | | £0.2 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £0.2 | | | | |
| Rural Wychavon | | | | | | | | |
| RAIL, LOCAL PASSENGER TRANSPORT AND WALK & CYCLE LINK SCHEMES | Including: (1) Provision of Infrastructure to enable local PT services to access & serve SWDP development sites. (2) Improvements to rail stations and associated interchange facilities (including cycle parking, information, access routes etc.). (3) Improvements to walking and cycling connectivity (4) Improvements to walking and cycling facilities and infrastructure | SWDP 4 & SWDP 7 | | £2.3 | Worcs CC (IT Block), Local Transport Board (Devolved Major scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £2.3 | | | | |
| Inter-Urban Highways | | | | | | | | |
| HIGHWAY SCHEMES | Including improvements to the A44 mainline (Evesham-Worcester), A38 junctions to the north of Worcester, A449 roundabout in north east Malvern, A449 to the north of Worcester | SWDP 4 & SWDP 7 | | £6.1 | Worcs CC (IT Block), Local Transport Board (Devolved Major Scheme Funding), Developers (s106, CIL & s278), New Homes Bonus, +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| TOTAL | | | | £6.1 | | | | |
| OVERALL COUNTY TOTAL | | | | £194.145 | | | | |

| Highways Agency: Strategic Road Network | | SWDP Policy | Delivery Partners | Estimated Construction Cost (£millions) | Potential Sources of Funding | Estimated Timescale | Costs/Funding/Delivery Notes | Further Details |
|---|----------------------------------|-----------------|--|---|--|--|------------------------------|-----------------|
| STRATEGIC ROAD NETWORK SCHEMES | A46 Evesham Bypass (5 Junctions) | SWDP 4 & SWDP 7 | Highways Agency, Developers, Worcestershire County council | £5.8 | Developers (s106 & s278) +other funding sources as available | Across both phases (2012-2020 & 2020 – 2030) | | |
| | M5 Junction 6 | | | £4.0 | | | | |
| | M5 Junction 7 | | | £0.5 | | | | |
| | TOTAL | | | £10.3 | | | | |

Notes to Table 4.1:

- Costs INCLUDE allowance for Supervision, Evaluation, Drainage, Preliminary Design, Site Supervision, Design Services and Utilities, Landscape, Traffic Management TM, Groundworks/Earthworks, Maintenance, Consultation, Ecology.
- Costs INCLUDE Optimism Bias, which represents a contingency allowance reflecting the early stage in the development of schemes. It is a standard approach developed by the DfT to avoid over-optimistic estimates of transport infrastructure costs.
- Costs EXCLUDE any land acquisition and CPO costs in the event that these are required.
- Maintenance costs are for 30 years from completion of works and are the expressed as % of total construction costs at this stage in scheme development.
- Costs INCLUDE allowance for: A46 Junctions and M5 Junctions 6 and 7 works (as separately assessed by HA).
- Costs INCLUDE allowance for: A4440/SLR capacity enhancements, Key corridors enhancements, traffic signal enhancements (SCOOT/MOVA etc.), amended TRO's, improvements to Worcester Foregate Street & Shrub Hill rail stations a new Worcestershire Parkway, improved bus stop infrastructure, Real Time Information Systems, new/improved walk and cycle routes and additional bridge.
- EXCLUDES City and Town Centre Public Realm Improvements.
- INCLUDES improvements to A44, A38 and A449.

The total costs across South Worcestershire for infrastructure and maintenance for the period to 2030 are as follows:

- Infrastructure: £204.4 million (including SRN)
- 30 year Maintenance: £48.5 million (excluding SRN)

It should be noted that as set out in the notes above, these costs include uplifts to allow for additional costs above and beyond the actual cost of construction. This includes items such as detailed design and evaluation, site preparation, site supervision, drainage, landscaping, ecology and traffic management. Different uplifts are applied for traffic management dependent on the local road network.

The costs also include significant allowance for contingency and "risk" (known as "Optimism Bias"). This is prudent in view of the early stage of development of a number the schemes. This is a standard approach (see 'The British Department for Transport Procedures for Dealing with Optimism Bias in Transport Planning Guidance Document – June 2004'). The Optimism Bias uplift is based upon the maximum applied rate for standard civil engineering works at this preliminary stage.

Schemes Excluded

Please note that the above table and costs exclude some elements of transport infrastructure and services improvements. Specifically they exclude:

- **Passenger Transport Service Enhancements:** The transport evidence associated with the transport elements of the draft SWDP show that enhancements to local and regional passenger transport services (bus and rail) will be required to

address accessibility issues, manage traffic congestion and support the delivery of sustainable development. Potential enhancements have been identified along with an estimate of operating costs (before revenue). However, further work will be required to identify the net change in operating surplus/deficit after allowance has been made of development generated demand and revenues. Promoters of developments must provide local passenger transport solutions to ensure that their site is accessible and sustainable. The promoters will be expected (as set out in the LTP3) to prepare a 20 year business case for the passenger transport provision which will demonstrate the scale and profile of any revenue support and the source of this funding (including from the promoter of the development), thereby demonstrating that the operation of services is financially sustainable in the medium to long term, and highlighting any "pump priming" requirements.

- **Inter-Urban Walk and Cycle Infrastructure:** Schemes have been developed which provide improved walk and cycle links between the main urban areas in South Worcestershire (e.g. Malvern – Worcester). These links would also serve a number of the proposed developments within the Draft SWDP and would serve a dual function of providing increased choice of transport modes for journeys generated by the new development and also support increased leisure use which will benefit both existing and new developments and the tourist/leisure industry. Further work is underway to identify the capital and ongoing maintenance costs of such measures and the extent to which the Draft SWDP is dependent upon their delivery.

4.4 Site specific access issues

Each of the specific sites detailed in the SWDP has its own detailed policy and associated explanatory text. The transport implications of each site have been considered and, either within the policy or the text, the SWDP highlights key transport issues and, in some cases, sets out specific transport requirements. Where appropriate, these requirements have been reflected in the SWIDP.

4.5 Conclusions

Overall the SWIDP gives confidence that the transport network could be sufficiently improved to support the level of development outlined in Policy SWDP 3 (albeit subject to securing appropriate funding).

5 The Sustainability Appraisal

5.1 Overview

This Chapter explains how the Integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) has influenced the development of transport aspects of the SWDP, in particular policy SWDP 4. The information for this Chapter has been drawn from the SA of the Preferred Option prepared by Enfusion in September 2011 (as this report summarises the findings of all the previous SAs).

Achieving sustainable development is the overarching aim of Spatial Planning, and integral to the National Planning Policy Framework. To ensure that planning policy promotes sustainable development it is a requirement that all Development Plan Documents are supported by a SA. This is an iterative process which informs the development of policy.

The following sections provide a brief summary of the SA transport related findings at each stage in the evolution of the SWDP. The SA's undertaken at an early stage in plan development (at the time of the Joint Core Strategy and its transport policy CS12) highlighted a number of issues and possibilities for improvement in how the plan dealt with transport issues. These issues were taken into account when formulating the SWDP and accordingly Policy SWDP 4 (first appearing in the SWDP Preferred Options) was influenced by these findings.

Policy SWDP 4 performed well in the SA undertaken on the Preferred Options document in 2011. Indeed, the SA identified no particular need for further enhancement to the policy. It therefore follows that the changes that were then subsequently made to policy SWDP 4 during the 'Significant Changes' phase were therefore made in response to other issues, and not directly as a result of the SA.

The SA of the Significant Changes confirms that the additions and amendments proposed do not alter the overall good performance of the policy against SA objectives and highlight no reason, on SA grounds, for further enhancement or amendment to the policy.

5.2 South Worcestershire Joint Core Strategy (SWJCS) - Issues and Options, 2007

At the SWJCS Issues and Options stage the SA was used to test a number of options. Its findings helped to shape the direction of the Core Strategy by dismissing some options/interventions and highlighting others that showed greater potential to contribute towards sustainability objectives.

In terms of where housing and employment growth should be located, the findings of the SA led to the clear rejection of some spatial options due to potential poor environmental performance (for example focussing development in Worcester's green belt) and the carrying forward of those options that generally looked to direct development to the existing urban areas of Worcester, Droitwich Spa, Wyvern and Malvern.

A number of options focussed on encouraging sustainable travel were also assessed. Overall the SA concluded that a combination of options would offer the most sustainable solution. Options for new or enhanced road capacity, increased motorway junction capacity, dualling the A4440 and/or a North West Bypass were shown to be unsustainable. The following options were seen to have potentially positive environmental effects through the SA and were taken forward for further consideration:

- Provide new integrated public transport services, e.g. Park and Ride, and improved bus facilities and rail capacity.
- Increase traffic management (excluding congestion charging) and parking controls in the centres of Worcester and Droitwich Spa, Evesham and Malvern to discourage through traffic, give priority to passenger transport, pedestrians and cyclists.
- Introduce road congestion charging.
- Secure car-free housing schemes in accessible locations.
- Promote community transport in rural areas.

The SA also considered a range of different ways of thinking about transport investment priorities. The option of setting priorities for infrastructure was considered more sustainable than seeking to prevent development until all essential infrastructure is provided.

The SA concluded that a new station at Norton (Worcestershire Parkway) was considered to be undeliverable at that time and as a result this was not taken forward to future documents. Note, that this was prior to the County Council undertaking Business and Operating Case development work, which highlighted that the scheme would be deliverable and would offer good value for money.

The findings of this early Issues and Options stage SA, along with a range of other factors, helped to set the tone for the way that the SWDP deals with transport. For example the current Policy SWDP (Significant Changes) retains a focus on sustainable transport measures, community transport and traffic management (in particular through parking standards). However, some of the other options that performed well in the SA at this early Issues and Option stage have not been taken forward for other reasons. For example, congestion charging has not been progressed because it was not considered appropriate for particular locations in South Worcestershire, in particular because other transport solutions have been explored.

5.3 South Worcestershire Joint Core Strategy (SWJCS) - Preferred Options 2008

The SWJCS Preferred Options set out the next stage of the development plan for the Malvern Hills, Worcester City, and Wychavon District Councils. It took account of the consultation feedback on the Issues and Options and refined these in order to present Spatial Policies for South Worcestershire's settlements and a set of Core Strategic Policies to guide the nature and type of development. A key evolution from the Issues and Options stage was the introduction of an overarching policy guiding the overall location of development and providing a settlement hierarchy.

The Preferred Options incorporated policy CS11 on Infrastructure Delivery. The commitment this made to sustainable transport measures was seen as positive.

Policy CS12 dealt with 'moving around South Worcestershire'. "The appraisal found that this policy is comprised of a series of sound, strong sustainability led commitments that directly support core SA objectives for transport, climate change, health and the community. It was considered that there was potential to further enhance the measures suggested through the promotion of car share, including incentives such as 2+lanes, priority parking, allocated spaces for car clubs etc." (SA of Preferred Options, 2011 - Section 5.28)

Reduction in road traffic and congestion was also highlighted by the appraisal as having clear economic benefits for business. Congestion charging was recommended

as having the potential to accelerate the environmental benefits identified with studies of existing schemes show that the impacts on business of this approach are at worst neutral. Including congestion charging where appropriate to address particular 'hot spots' of congestion, was suggested to offer a further option to improve the sustainability benefits of this policy approach.

The results of the JCS Preferred Options SA appraisal generally endorsed the approach of Policy CS12 and this was effectively rolled forward to become Policy SWDP 4. However the observations made about how additional benefits could be derived have not been taken forward. Car sharing is not explicitly mentioned in Policy SWDP4, although travel plans and similar initiatives that may in turn support/involve car sharing are key. The JCS Preferred Option SA highlighted congestion charging as a potential consideration however this was not developed as it was not considered appropriate for particular locations in South Worcestershire.

5.4 Interim consideration of options

Following consultation on the JCS Preferred Options the Council considered a number of options for the strategic location of development. These took forward a focus on development primarily within urban extensions and in this context considered a number of viable sites.

These possible sites were all subject to a red, amber, green assessment against the SA/SEA objectives. Eight sites were shown to have potentially adverse impacts in terms of travel and transport. In one case (land at Copcut lane) poor access was cited as a reason for rejecting this site.

5.5 South Worcestershire Development Plan (SWDP) Preferred Options, 2011

The SWDP Preferred Options built on the directions for growth considered through the SWJCS Issues & Options and Preferred Options stage and brought together strategic policies and more detailed development management policies as well as urban and rural site allocations for each of the three authorities.

Policy SWDP1 dealt with the development strategy and settlement hierarchy. Generally this performed well when assessed against the SA objectives. It was shown to support and enhance community identity and the integrity of existing settlement locations. The SA concluded that "Effects on travel and transport are uncertain in the short term, although directing development to areas with existing infrastructure and requiring sustainable transport options to be integral to new development will potentially promote positive outcomes and effects in the medium to long term." (para 6.14 SA of SWDP Preferred Options).

Policy SWDP 4, moving around South Worcestershire, also performed well in the appraisal. The SA states (in paras 6.20 and 6.21 of the Preferred Options SA document) "the focus of this policy on supporting and delivering sustainable transport solutions for new & existing developments is likely to have a positive effect for communities and infrastructure objectives. Improving the ability of communities to reach services through walking, cycling and public transport supports equality of access. Additionally, the focus of ensuring that new developments must set out measures to reduce the demand for travel by private cars provides support for a 'people' led approach to travel that enhances long term community health and wellbeing. The policy also addresses the requirement to reduce congestion at defined pinch points in the existing transport network through measures set out in the Local Transport Plan 3. Improvements to traffic flow provide indirect support for economic

SA objectives by improving conditions for business and accessibility for employees across the plan area.”

Overall the SA concluded that Policy SWDP4 would help to resolve existing problems associated with nine out of fourteen objectives impose no sustainability constraints in relation to a further two objectives and was neutral with regard to the remaining three objectives.

It goes on to say, in para 6.21 (of the Preferred Options SA) that “The promotion of sustainable travel solutions, that seek to move away from private car/ road based transport provides direct support for SA objectives on climate change, pollution and biodiversity, by reducing the long term cumulative impacts of greenhouse gas emissions from vehicles. Measures to manage the volume and car parking spaces and promote infrastructure provisions for low emission vehicles also provide indirect support for design/ sustainable construction objectives through the linkages with BREEAM and Code for Sustainable Homes criteria. A policy approach that seeks to manage travel demand (private car remains the primary transport mode in South Worcestershire) and improve sustainable travel options is likely, at a strategic level, to have positive long term effects for biodiversity and wider historic environment and pollution objectives by reducing the levels of emissions arising from combustion sources. Key improvements will be contingent on the delivery of the LTP3 strategy and/or new funding sources.”

The SA therefore did not highlight any particular issues for detailed consideration going forward. Indeed, commenting on Policy SWDP4 the SA concluded that “the focus of this policy on supporting and delivering sustainable transport solutions for new and existing developments is likely to have a positive effect for communities and infrastructure objectives” (para 6.2- of the Preferred Options SA document). The changes that were subsequently made to Policy SWDP 4 in the Significant Changes stage were therefore not attributable to the SA.

5.6 South Worcestershire Development Plan (SWDP) -Significant Changes, 2012

Following consultation on the Preferred Options a number of changes were proposed to the SWDP as a whole. A number of relatively minor changes to Policy SWPD 4 were proposed. These changes - known as the ‘Significant Changes’ were subject to a further SA in 2012.

The assessment noted that the Significant Changes include a slightly stronger stance on parking standards and concluded that “This may have minor positive effects through improving air pollution and greenhouse emissions, but overall the changes are not considered significant for the purposes of the IA” (Appendix 2 to the 2012 SA of the Significant Changes).

The SA of the Significant Changes therefore highlighted no further need for enhancement or refinement to policy SWDP 4.

6 Consultation

6.1 Stages of consultation

At each stage in the development of the SWDP there has been a public consultation exercise. The results of these consultations have been used to help shape the evolution of the document. Consultation on the Significant Changes (referred to as the Targeted Consultation) ended in September 2012. Feedback from this round of consultation was considered prior to publishing the Pre-Submission Draft. This Chapter therefore focuses on previous rounds of consultation and shows how consultation feedback influenced the development of Policy SWDP 4.

The key consultations shaping the transport elements of the SWDP are:

- South Worcestershire Joint Core Strategy Issues and Options Paper, November 2007.
- Consultation on the South Worcestershire Joint Core Strategy Preferred Options Document, September to October 2008.
- Consultation on the Site Allocations and Policies Development Plan Document, September 2009 to May 2010.
- South Worcestershire Development Plan. Town and Parish Council Briefing & Workshop, Nov 2010.
- Consultation on the Preferred Options - 2011.
- Targeted consultation on the Significant Changes - 2012.

The following paragraphs provide more detail on the key stages of consultation and explain how comments have influenced the development of Policy SWDP4.

6.2 South Worcestershire Joint Core Strategy - Issues and Options, 2007

The SWJCS Issues and Options report presented a number of travel related issues that would need to be addressed if the over arching aim of planning to achieve sustainable development is to be achieved. The relevant questions posed by this round of consultation were:

- Issue 8 What can be done to reduce the need to travel by car in South Worcestershire?
- Issue 9 What can be done to encourage more sustainable means of travel?
- Issue 10 What should be our priorities for improving transport infrastructure?
- Issue 11 How do we ensure the provision of infrastructure in advance of development?

In response to Issue 8 consultees thought new development should be accessible by a range of transport choices, i.e. not just by car owners and users, and that new development should provide or have easy access to a range of every day services. There was support for new transport infrastructure of all kinds but improved public transport was particularly well supported. Respondents did not consider the aim of reducing commuting was achievable.

Policy SWDP 4 reflects this overall message by emphasising the need for new development to offer genuine travel choice.

The Highway Agency response included a request that all new development should be required to produce and implement a Travel Plan.

This requirement is now reflected in Policy SWDP4 (for developments of all sites of 10 units or more or exceeding 1,000 square metres).

The County Council's response suggested there is a requirement for rapid transit systems (including bus priority) along major routes into and out of Worcester and the major towns as well as a need for demand management measures in all the urban areas within South Worcestershire.

SWDP 4 picks up on these issues by supporting the delivery of the WTS which aims to enhance bus infrastructure on the main corridors into Worcester and deliver transport packages for the main towns.

In response to Issue 9 consultees wanted new integrated transport services, community transport for rural areas and a Worcestershire Parkway Station at Norton. Statutory consultees wanted a comprehensive approach that used all possible options to promote alternatives to car travel.

Policy SWDP 4 responds to these comments by emphasising the importance of community transport, prioritising the development of Worcestershire Parkway and setting out a requirement for new developments to maximise travel choice.

In response to Issue 10 all consultees supported all of the options and particularly supported the option that development should not proceed without the provision of essential transport infrastructure. However the responses did not provide guidance on which options should be prioritised or which transport improvements are consider essential?

Issue 11 generated a similar response to Issue 10 in that there was overwhelming support for infrastructure being provided before or at the same time as new development Very few responses however provided any suggestions as to how this could be achieved.

The explanatory text to policy SWDP 4 deals with this issue. It states that "it is acknowledged that it will not be possible to provide all infrastructure prior to new development taking place, due to the limited availability of large scale funding. However, it is the aspiration of the south Worcestershire authorities that the majority of strategic transport infrastructure....should be committed to prior to agreeing a final phasing plan for development."

6.3 South Worcestershire Joint Core Strategy - Preferred Options, 2008

The consultation on the SWJCS Preferred Options and in particular Policy CS12 raised a wide variety of comments on transport, including the following:

- There was a general call for transport improvements to be in place before large new developments go ahead. *The explanatory text to SWDP 4 in the Preferred Options document referred to the importance of ensuring that the majority of infrastructure should be committed prior to a final phasing plan for development being agreed.*
- There was some concern that the policy was not clear enough in stating that rail improvements would depend on partnership working. *The explanatory text in the SWDP Preferred Options and later versions emphasised the importance of partnership working.*
- The need to emphasise improvements to walking was noted. *Policy SWDP 4 of the Preferred Options version of the SWDP added additional reference to walking, for*

example emphasising that Travel Plans ought to set out measures to stimulate walking and stating that priority will be given to walking and cycling infrastructure. This emphasis is retained in the Pre-Submission Draft.

- There was support for the fact that development should be required to provide and implement a Travel Plan, which should be used to promote alternatives to the use of cars. *Policy CS 12 included reference to a requirement for Travel Plans - this reference was retained as Policy CS 12 evolved into Policy SWDP 4 through the SWDP preferred options and significant changes stages. The latest transport policy SWDP 4 in the Pre-Submission Draft continues to emphasise the importance of Travel Plans.*

6.4 South Worcestershire Development Plan - Preferred Options Consultation, 2011

Several hundred responses were specifically related to SWDP 4. The overwhelming majority of these were related to individual transport infrastructure requirements. Some were associated with particular site allocations and many were seeking infrastructure improvements such as a Worcester North West bypass that are not required to support the level of development proposed by the SWDP.

There were comments supporting/favouring sustainable transport infrastructure although these were a small minority of the overall responses.

In the Preferred Options consultation Worcestershire County Council commented that land should be reserved adjacent to the railway between Droitwich and Stroke Works with a view to protecting potential track dualling for future capacity enhancements.

In direct response to this comment the Significant Changes proposed that a paragraph be added to Policy SWDP 4 to protect the land required for rail infrastructure improvements. The Draft Pre-Submission version also now includes specific reference to safeguarded land.

6.5 South Worcestershire Development Plan - Significant Changes Consultation, 2012

The consultation responses to the Significant Changes generated a small number of comments about policy SWDP 4. The majority of comments are unlikely to result in any change to Policy SWDP 4 or its explanatory text. However, following feedback, it is likely that a number of additional documents will be recognised as forming part of the evidence base.

Worcestershire County Council's comments on the Significant Changes focussed on the need to protect land (as the SC version did not specifically mention safeguarding land). Specifically the County Council commented that the SWDP should protect land necessary to deliver the Worcester Transport Strategy. Furthermore, the County Council noted that the SWDP should be closely linked and contribute to the delivery of all the transport elements of the Infrastructure Delivery Plan (once defined) and suggested specifically that the SWDP transport policies should more clearly reference the need to protect the land required for the proposed Worcestershire Parkway station and transport interchange.

In response the Pre-Submission Draft include specific text on safeguarding land. It states that "The following sites and corridors shown on the proposals map will be safeguarded from any development that might prejudice future enhancements to the local and national rail network. 1) Worcestershire Parkway 2) Cotswolds and Malvern Line 3) Droitwich Spa to Stoke Works and 4) Stratford to Cheltenham Line including the former Chord Lines at Honeybourne Junction."

Appendix A Relevant Policies

SWDP 4: Moving Around South Worcestershire (as in the Pre-Submission Draft, November 2012)

A - Managing Travel Demand

Proposals must demonstrate that the location of development will minimise demand for travel, offer genuinely sustainable travel choices, improve road safety and support the delivery of the Worcestershire Transport Plan objectives.

Travel Plans will be required for all major developments. These must set out measures to reduce the demand for travel by private cars and stimulate cycling, walking and public transport through agreed targets and monitoring arrangements.

(For residential uses major is defined as 10 units or more. For all non-residential uses, major is defined as exceeding 1,000 sq. m. (net) floorspace. The agreed targets within a Travel Plan will reflect the potential of the end use to offer realistic travel choices.)

New development should accord with the design criteria and principles set out in Manual for Streets, Worcestershire County Council's Local Transport Plan 3 Highways Design Guide for new developments, the Design Guide Supplementary Planning Document and the Parking Standards in New Development Supplementary Planning Document.

B - Providing alternative modes of travel

Priority will be given to improving public and community transport provision, walking and cycling infrastructure during the plan period. All new developments will be expected to contribute to the provision of sustainable transport infrastructure either through direct investment in facilities or by financial contributions.

In order to promote more transport choice in rural areas, community transport and innovative transport projects, including those that promote the use of new vehicle technology, will be encouraged in conjunction with new development proposals.

All town centre development will need to show that the needs of alternative powered vehicle users have been considered.

C - Delivering transport infrastructure to support economic prosperity

The following major transport schemes, as identified within the Worcestershire Local Transport Plan 3, will be prioritised:

1. Worcester Transport Strategy Phase 1
2. Worcestershire Parkway
3. Evesham Abbey Bridge
4. Urban transport packages for the towns of Malvern, Tenbury Wells, Upton upon Severn, Pershore, Evesham and Droitwich Spa

Development proposals that are likely to prejudice the future development of these strategic transport schemes, or that have an adverse impact on existing or proposed public transport facilities and the implementation of identified highway improvements or traffic management schemes such as those along the A4440 (Southern Link) at Worcester, will not be permitted.

With respect to growth at Worcester, the highway authority has indicated that the Worcester Transport Strategy Phase 1 only addresses existing transportation needs at

2010 along with projected background growth for travel demand. The implementation of 9,400 dwellings and 117ha of employment land up to 2030 will therefore be dependent upon the development and satisfactory implementation of additional elements of the Local Transport Plan 3 Worcester Transport Strategy, including:

- i. Partial dualling of the Southern Link Road
- ii. Multi-modal enhancements on all the remaining key radial and orbital transport corridors in Worcester City
- iii. Additional walk and cycle route enhancements
- iv. Upgrade of Worcester Shrub Hill station and associated improvements to the local highway network
- v. Smarter Choices (Choose How You Move) measures at all new developments (traffic generation increases by approximately 10% without these measures)

The following sites and corridors as shown on the Proposals Map will be safeguarded from any development that might prejudice future enhancements to the local and national rail network.

1. Worcestershire Parkway Station
2. Cotswolds and Malvern Line
3. Droitwich Spa to Stoke Works
4. Stratford to Cheltenham Line including the former Chord Lines at Honeybourne Junction.

D - Transport Assessment Strategy

Transport Assessments must be carried out to the requirements of Worcestershire County Council and as set out in the Local Transport Plan 3 and associated supporting policies and guidance including:

1. Local Transport Plan 3 Development Control (Transport) policy
2. Worcestershire County Council Guidance on Transport Assessments and Statements
3. Worcestershire County Council Highway Design Guide
4. Worcestershire County Council Sustainable Urban Extension Developments Transport Requirements

E - Car parking standards

Locally determined car parking standards will apply to all development proposals, which will be set out in Supplementary Planning Documents.

F - Implementation

Financial contributions from development towards strategic transport infrastructure will either be secured through the Community Infrastructure Levy charging schedule or the Developer Contributions Supplementary Planning Document as appropriate to the circumstances of the development. New development will need to be incorporated into a co-ordinated infrastructure and service delivery programme agreed with the south Worcestershire authorities and Worcestershire County Council. The Infrastructure Delivery Plan provides additional guidance about how this co-ordination will be achieved. Where appropriate site-specific transport improvements

may be sought through s.106 or other agreements in accordance with Worcestershire
County Council's Design Guidance

SWDP 4: Moving around South Worcestershire (as appears in the SWDP Preferred Options, as amended by the Significant Changes)

Managing Travel Demand

Proposals must demonstrate that the location for development will minimise demand for travel, offer genuine sustainable travel choices, improve road safety and support the delivery of Local Transport Plan Objectives.

Travel Plans will be required for all sites of 10 or more units⁽¹²⁾. These must set out measures to reduce the demand for travel by private cars and stimulate cycling, walking and public transport through agreed targets and monitoring arrangements.

New developments should accord with the design criteria and principles set out in Manual for Streets, Worcestershire County Council's Highways Design Guide for new developments and the Design Guide Supplementary Planning Document.

Providing alternative modes of travel

Priority will be given to improving public and community transport provision, walking and cycling infrastructure during the plan period. All new developments will be expected to contribute to the provision of sustainable transport infrastructure either through direct investment in facilities or by financial contributions.

In order to promote more transport choice in rural areas, community transport and innovative transport projects including those which promote the use of new vehicle technology will be encouraged in conjunction with new development proposals.

All town centre development will need to show that the needs of alternative powered vehicle users have been considered.

Delivering transport infrastructure to support economic prosperity

The following major transport schemes as identified within the Worcestershire Local Transport Plan 3 will be prioritised:

- Worcester Transport Strategy Phase 1
- Worcestershire Parkway
- Evesham Abbey Bridge
- Urban transport packages for the towns of Malvern, Tenbury Wells, Upton-upon-Severn, Pershore, Evesham and Droitwich Spa.

Development proposals which are likely to prejudice the future development of these strategic transport schemes; or have an adverse impact on existing or proposed public transport facilities and the implementation of identified highway improvements or traffic management schemes such as those along the A4440 (Southern Link) at Worcester, will not be permitted.

With respect to growth at Worcester the highway authority has indicated that the Worcester Transport Strategy Phase 1 only addresses existing transportation needs at 2010 along with projected background growth on traffic demand. The implementation of 8400 dwellings and 124 hectares of employment land up to 2030 will therefore be dependent upon the development and satisfactory implementation of Worcester Transport Strategy Phase 2 under the Worcestershire Local Transport Plan.

Transport Assessment Strategy

When considering development proposals and associated improvements to the local transportation network, a full risk assessment will be required to minimise environmental impact and any resulting disruption to the strategic transport network.

Car parking standards

Preferred Options - Locally determined car parking standards will apply to all development proposals, which will be set out in Supplementary Planning Documents.

Significant Changes - Parking standards must be planning policy - they cannot be left to a Supplementary Planning Document. Parking standards need to be set out in an appendix to the plan and these standards should be the subject of public consultation.

Implementation

Financial contributions towards strategic transport infrastructure will be secured through the Community Infrastructure Levy charging schedule. New development will need to be incorporated into a co-ordinated infrastructure and service delivery programme agreed with the South Worcestershire authorities and Worcestershire County Council. Where appropriate site-specific transport improvements may be sought through Section 106, Section 278 and Section 38 Agreements in accordance with Worcestershire County Council's Design Guidance."

Rail infrastructure

Significant Changes - Add a paragraph to SWDP 4 protecting land for rail infrastructure enhancements and show these on the policies map.

SWDP 6 - Infrastructure (added at Significant Changes)

The three South Worcestershire Councils will work closely with their partners, especially the County Council, to bring forward the necessary and proportionate crucial infrastructure that is required in order to deliver the Spatial Strategy as set out in the Plan. The current assessment of crucial infrastructure requirements is set out in appendix Y to this Plan and will be explained in more detail in the Infrastructure Delivery Plan.

Development will be required to provide or contribute towards the provision of infrastructure needed to support it. Developers will also need to contribute towards community benefits related to the development.

Where new infrastructure is needed to support new development, the crucial infrastructure must be operational no later than the completion of the development, or the appropriate phase of development, for which it is needed.

The three South Worcestershire Councils each intend to introduce a co-ordinated Community Infrastructure Levy by March 2014.

The three South Worcestershire Councils intend to explore a range of funding mechanisms in order to finance the necessary and proportionate crucial infrastructure and these will be set out in more detail in the Infrastructure Delivery Plan in Autumn2012

Policy SWDP 6 was progressed into Policy SWDP 7 on Infrastructure, with updated wording.

Proposed Policy CS12 Moving Around South Worcestershire. Taken from the Joint Core Strategy preferred Options Consultation Document.

“All developments must demonstrate that the proposed location will minimise the demand for travel and offer genuine sustainable travel choices.

Through the implementation of the Joint Core Strategy policies and the associated implementation plan, development will be guided to achieve the objectives of Local Transport Plan 2.

All practical demand management measures will be implemented before development takes place in order to suppress demand for travel by car.

New and/or enhanced public transport interchanges will be developed in Worcester, the Main Towns and Other Towns. Priority will be given to improving, walking, cycling and public transport infrastructure. Developments will be expected to contribute to the provision of sustainable transport infrastructure either through direct investment in facilities or by financial contributions for sustainable transport.

Travel Plans will be required for all major developments. These must set out measures to reduce the demand for travel arising from the development, together with targets and monitoring arrangements.

In order to encourage healthy life styles, residential developments will adopt Home Zone principals and those design criteria set out in the Manual for Streets.

Maximum car parking standards will apply to all development proposals and these will be set out in Supplementary Planning Documents to a scheme to be agreed by the three South Worcestershire authorities and Worcestershire County Council.

In order to promote more choice in rural areas, community transport and innovative transport projects will be supported.”