Growth Point Connectivity Phase 1

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Growth Point Connectivity: Executive Summary

Background to the study

This study addresses issues in the rural west of the Region. It focuses on Telford, Shrewsbury and Hereford, which as potential Growth Points and Impact Investment Locations and are preparing for very significant new housing and employment growth in the period 2006 to 2026.

2006 - 2026	Telford	Shrewsbury	Hereford
Additional houses	25,000	6,500	8,500
Existing households	53,940	27,786	22,000
Percentage increase	**46%**	**22%**	**39%**

The need for the study was identified in the Regional Work Programme, submitted in response to the Government's guidance on Delivering a Sustainable Transport System. The overarching strategic priorities for the West Midlands set the context for the study:

- Sustaining and strengthening the West Midlands' economy
- Delivering urban and rural renaissance, including housing growth and the provision of affordable homes
- Expanding skills and employment

The challenges relevant to this study, as identified in the Regional Stage 1 submission are:

- Addressing the demand for travel resulting from new development, both employment and housing (WM4).
- Reducing the need for travel (WM7).
- Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8).

Relevance to other areas

The lessons learnt are applicable to similar towns and cities, especially other Growth Points and Impact Investment Locations. Each study settlement has the potential to be an exemplar for different ways of dealing with the transport impacts of growth.

Study approach

The three settlements are different in size, history and character and this affects how people travel. The study has been designed to highlight the **economic, environmental and social issues** to give a typology of each place, drawing lessons from their differences or similarities. It then examines the **challenges** associated with planned growth and the consequent demand for travel. It considers relevant **case studies** and examples of good practice. It identifies a comprehensive range of **sustainable interventions** to address the challenges, including smarter choices and initiatives to influence travel behaviour, and **prioritises** them for each place.

Understanding travel behaviour

Extensive use has been made of information available from the Office of National Statistics (ONS), especially the results of the 2001 census. This provides an unparalleled level of detail (at ward level) which enables travel to work patterns to be analysed. We have presented the census data graphically to give a clear view of the different travel behaviours in the three towns. In some cases these differences are very striking – most notably between Telford and the other places, but also highlighting differences between two apparently similar places, Shrewsbury and Hereford.

Understanding how the transport networks perform

The extensive Traffic Master database gives accurate and detailed information about the performance of the highway network in each place. The results show that Telford's purpose built highways network operates with very little congestion at peak times. There are identifiable areas of Shrewsbury where roads become congested at peak times, including sections of the A5 and A49 bypasses and the northern and western approaches to the town centre. Using the same criteria it can be seen that congestion in Hereford is a significant problem, especially on the A49 bridge over the River Wye.

Understanding economic, environmental and social issues

Telford	Shrewsbury	Hereford
Telford is a new town developed around several older settlements. It is a fast growing economic centre with a dynamic record of inward investment. Some 20% of its workforce is employed in manufacturing. Though close to the West Midlands conurbation, Telford is surprisingly self-contained with 79% of working residents having jobs in the town. Telford was designed on the assumption that people would travel by car, with a modern, purpose built road system that does this job very well. Homes and workplaces are separate and linked by good roads, so car is the obvious choice for many journeys and fewer people cycle or walk to work than in the other towns. Telford has the least sustainable transport behaviours. Its centre lacks the variety and fine grained character of older settlements and is not easy to walk to. Few people live in the centre and it has no night time economy. Telford has an adopted Core Strategy to 2016 and is developing a Central Area Action Plan. This includes ambitious plans to redevelop the town centre to create a more vibrant, less car dominated area with denser housing to provide critical mass.	**Shrewsbury** is slightly less self-contained, with 73% of its working population employed in the town. A further 10% commute to Telford. Shrewsbury attracts residents who work elsewhere. It has little manufacturing. Cycling and walking are significant modes, accounting for 19% of journeys to work. People living in newer housing estates seem to travel less sustainably than those in older, more densely populated areas of the town. This has implications for growth and should be examined in more detail. Shrewsbury has a radial road network, to which has been added an outer bypass on three sides of the town and an inner distributor road. Connectivity between different parts of the town is generally good. A Local Development Framework Core Strategy has been published and key policies have been taken into account in this study	The city of **Hereford** has the most sustainable travel patterns of the three. Walking and cycling account for nearly a quarter of journeys to work. The city retains some traditional industry within the town and at Rotherwas. However, earnings are the lowest of the three places, well below the regional and UK average. Hereford is compact and self contained (76% of its working population have jobs in the town) and offers its residents a high quality of life. It has a radial road network,. The city is divided by the River Wye, and there is only one principal road bridge. There is significant congestion already, even without the planned growth. Hereford's Core Strategy will be sdubmitted later this year.

Challenges related to growth and the need to manage / reduce demand (linked to WM4, WM7)

Telford	Shrewsbury	Hereford
To use growth to re-shape the urban form, to encourage more sustainable travel and avoid further reinforcing its car-based culture.	***To accommodate substantial growth whilst further developing characteristics conducive to sustainable travel behaviour. As it grows there is a danger that it could become more, not less, car-dependent.***	***To cope with the traffic impacts of the substantial growth proposed, given that it presently has a much less developed road network, whilst further developing existing characteristics conducive to sustainable travel behaviour***

Issues and challenges related to encouraging sustainable transport modes (linked to WM8)

Cycling

Telford	Shrewsbury	Hereford
All three settlements have purpose built cycling infrastructure. However, the extent to which this is used varies enormously. Telford has good cycling facilities, but there is much less cycling for work journeys. It appears that simply providing facilities is not enough to get people cycling – there also has to be a culture of cycling, key journeys need to be of the right length and cycle journeys need to compare favourably with car use in terms of convenience.		
The challenge in Telford is to use the anticipated new development to create an urban form and density that is more conducive to cycling and walking.	***The challenge in Shrewsbury and Hereford is to maintain and develop the cycling culture through a combination of hard and soft measures to support and facilitate cycling.***	

Walking

Telford	Shrewsbury	Hereford
In Telford, there are extensive off-road walking routes, but few traditional streets to walk along. The distributor roads are far less conducive to walking, even where they include pedestrian facilities.	Shrewsbury and Hereford are fortunate, insofar as their natural and built form includes attractive walking routes, via pedestrian river bridges, parkland, historic streets, alleyways and landmark buildings which provide interest and a sense of place, reinforced by selective improvements.	
The challenge for Telford is to use new development and increased density as an opportunity to create variety, interest and orientation for journeys on foot.	***The challenge for Shrewsbury and Hereford is to understand, protect and enhance those characteristics of place which make it easy and attractive for people to walk.***	
In all three settlements, newer developments, such as supermarkets, retail units and workplaces have often been designed and built with car access in mind. Pedestrian access, where provided, can often be “coarse grained” and involve negotiating a sea of car parks and access roads. New roads are rarely designed as streets with active frontages and continuous high quality pedestrian facilities. Over time, parts of traditional towns can become places which are less friendly – sometimes even quite hostile - to people on foot. In all three settlements, safety and security considerations often dictate that new housing estate roads are winding and indirect, with limited access to main roads and few alleys or short cuts – whereas people on foot need direct, straight routes and clear lines of sight to the next corner, landmark building or feature. Use of lighting, surface materials, trees and street furniture all have a role to play. The more fine grained an area is, the more likely people are to be able to walk or cycle. The absolute separation of workplaces and homes, is a product of a car-based society, and makes it less likely that people will walk to work.		
The challenge for all three settlements, as they face substantial growth, is to pay greater attention to the built form and function of new development, to avoid the pressures of developers for car-dominated schemes and deliberately to build in those details which really work for people on foot.		

Public Transport

<table>
<tr><th>Telford</th><th>Shrewsbury</th><th>Hereford</th></tr>
<tr><td>Telford has had more success than the other settlements in growing bus patronage, through the promotion of quality bus routes. There is evidence that, with time, the effects of this can wear off and passenger satisfaction levels have fallen.</td><td>In Shrewsbury, public transport improvements, including Park and Ride and real-time information were achieved through capital investment . Park and Ride remains popular (though still subsidised).</td><td>In Hereford, decisions by bus operators combined with a local authority focus on rural services has led to a decline in the use of urban bus services.</td></tr>
<tr><td colspan="3">A challenge for all three places is to prevent decline in urban bus services, and ensure that good services are available as soon as housing and employment areas are developed.</td></tr>
<tr><td>Telford’s free-running road network means buses are less affected by congestion.</td><td colspan="2">In Shrewsbury and Hereford, there are very limited opportunities for further physical bus priority.</td></tr>
<tr><td></td><td colspan="2">A further challenge for Shrewsbury and especially Hereford will be to maintain and improve the reliability of bus services on increasingly busy local road networks.</td></tr>
<tr><td></td><td colspan="2">Many people travel into Hereford and Shrewsbury from rural areas. In Shrewsbury, Park and Ride offers an alternative to driving all the way to town.</td></tr>
<tr><td></td><td></td><td>A challenge for Hereford is to address the needs of people travelling to the city for work, recreation and shopping.</td></tr>
<tr><td colspan="3">A challenge for all three places, as they grow, is to consider whether they are capable of achieving a radical improvement in the quality and image of public transport, to a point where it becomes an attractive alternative even for people who have a car.</td></tr>
</table>

Link to other regional/local objectives/work

In parallel with the DaSTS study, other relevant work includes recent and ongoing studies of:

- Telford town centre transformation and Greyhound Link Road
- Hereford Edgar Street Grid regeneration
- Hereford Relief Road (ODR)
- Shrewsbury Cycle Towns Demonstration Project
- Shrewsbury North West Relief Road (preparation of proposed MSBC)

Tools and assumptions used – modelling

Outputs from existing models for Telford, Shrewsbury and Hereford have been used to inform the study: no new modelling work has been done. We have used the base year model outputs to represent the existing (2006) situation in each settlement. Future year forecasts represent conditions with all of the planned growth in place, both with and without the major highway interventions under consideration in Shrewsbury and Hereford. All three models are currently being adapted from the roles for which they were originally built, and will give more informative results for use in the Phase 2 study

Sustainable transport health checks

A comprehensive health check has been undertaken in each settlement, working with local authority officers and from available data, to determine where “Smarter Choices” interventions have been, or could be, successfully delivered. These complement the review of evidence on smarter choices from other towns and cities.

Option generation

A "long list" of generic interventions has been identified for appraisal under the following themes:

- Strategic governance and fiscal measures
- Spatial planning policy / land use planning
- Vehicle technology developments
- Strategic Smarter Choices
- Travel Plans
- Promotion and marketing
- Walking and DDA access
- Cycling
- Public transport innovation & quality
- Public transport – Park and Ride
- ITS parking strategies and tools
- Freight Management
- Water transport
- Highways infrastructure and network capacity enhancement
- Management, monitoring, measurement

Option appraisal

Each intervention was evaluated using a specially adapted assessment tool in a workshop that included regional stakeholders and representatives of each settlement. The appraisal reflects the baseline information and the challenges. Scoring was based closely on criteria in the DfT's strategic appraisal tool, although the tool itself is considered more appropriate for Phase 2. Each intervention was also scored according to the DfT's five DaSTS goals. The result is a profile of the generic interventions appropriate in each place.

Telford	Shrewsbury	Hereford
The greater distances involved suggest a stronger emphasis on cycling than on walking. Buses could play a more important role, building on the success of Quality Partnerships. Area Traffic Control could provide enhanced benefits. Travel Planning measures would play a big part in any package, with corridor based schemes, personalised travel planning and targeted promotions. The location and form of new development has a key role. It would easy to reinforce the car-based culture, yet there are opportunities to achieve denser development making bus use more viable. The detailing of new development can also affect mode choice, and this can be addressed through Section 106 strategies, and Supplementary Planning Documents.	Cycling would have a major role, building on the Cycle Towns Initiative. Shrewsbury's compact nature and historic character provides opportunities to support and encourage walking, by further improving pedestrian connectivity, and ensuring that new developments are designed to encourage walking. There is scope for improvements to the perception of public transport, including improvement, or replacement of, the bus station. Through spatial planning tools (Area Action Plans, SPD guidance and Section 106 strategies) it should be possible to achieve improvements to bus access. Consideration should be given to a new rail station, (as a parkway station for out-commuting and as a possible park and ride site) and to the development of a rail travel plan. The evidence suggests that strategic smarter choices and travel planning interventions should feature strongly in a Shrewsbury package. There is scope for area traffic control to make best use of the constrained road network, with more advanced ITS systems for car parking and use of car parking as a demand management tool.	There is potential to build on already high levels of cycling with physical improvements, promotions, information and signage. Hereford is a very walkable city, and any package should include further improvement to pedestrian routes, and promotion of walking There is scope for Park and Ride to the town centre. With its constrained network, there are opportunities to develop Area Traffic Control to give advantages to buses. Strategic smarter choices and travel planning interventions should continue to feature strongly in a package for Hereford. This should include increased promotion and marketing, with personalised travel plans, area travel plans, and residential travel plans, secured through Section 106 agreements and development control policies.

The initial sift indicates that improvements to highways infrastructure cannot be dismissed:

Telford	Shrewsbury	Hereford
In **Telford**, the proposed Greyhound Link Road could form part of an overall package, enabling greater density of development and better access by all modes to the town centre.	In **Shrewsbury**, a North West Relief Road would help avoid a worsening of existing congestion at critical points on the town's road network, including the trunk road bypasses	In **Hereford**, a Relief Road would address existing congestion on the A49, by providing a new river crossing. The extent and phasing needs to be considered in relation to the planned growth.

In all three cases the evidence suggests that major highway interventions are unlikely to provide a "complete" solution to the problems of growth. Measures to reduce demand, encourage mode shift and mitigate the impacts of growth will be needed, irrespective of whether major schemes are delivered.

Engagement

Stakeholder engagement to date

The study has involved close engagement with representatives of the three study settlements, and with representatives of regional stakeholders including the Joint Strategy and Investment Board, DfT, the Highways Agency and Government Office West Midlands. Two specific events were held, in Shrewsbury and Telford for local stakeholders, including elected representatives.

Sharing ideas and best practice

We have examined outputs from the DfT Sustainable Travel Towns programme, with particular reference to work in Worcester. It is clear that significant changes in demand can be achieved through the systematic and determined application of appropriate "Smarter Choices" measures. Car driver trips were reduced by 9%, and there have been significant increases in bus use cycling and walking. Provided there are real travel choices available (e.g. good bus services) such measures could have a major role in the study settlements.

Examples of gaps in evidence

A number of gaps have been identified which could be addressed in Phase 2 of the study.

- The study has not examined fully the links between economic growth and transport connectivity.
- The scale of this study has not allowed new options to be tested using the traffic models
- Understand impacts of physical layout of new development on people's use of sustainable transport.

Proposals for next phases of the work (Phase 2)

Telford, Shrewsbury and Hereford are typical of many similar towns and small cities in the WM and the UK generally. Thousands of new homes are planned for such places. Phase 1 identifies the types of interventions needed to address the resulting challenges. Phase 2 will build on the evidence of Phase 1, helping to develop practical packages and giving insights into what could be achieved in these and similar places.

- Phase 2 of the study will start from the results of the preliminary sift of generic options. Working closely with the three local authorities, more specific options will be identified
- Further work will be undertaken to determine the level of demand reduction and/or mode shift and carbon reduction that can be expected as a result of these options, using the traffic models as appropriate;
- This will include further consideration of the way that the physical layout of new development influences people's use of sustainable transport;
- Further consideration of the links between transport and economic growth
- Drawing on the detailed studies being undertaken in each area (including the revised models and work to determine locations for development), work will be undertaken to determine in more detail the relationship of the possible highways options to planned development;
- Further sifting will then be undertaken to compare all the options and identify possible alternative packages for each of the settlements;
- An appraisal of the most promising options and packages to arrive at a preferred solution.

As well as helping develop realistic packages for each of the study settlements, which could feed into their respective LTP processes, Phase 2 of this study provides an opportunity to develop exemplar packages, which could have application in other, similar places. This is an important opportunity, building on our Phase 1 findings that the solutions for each place will need to be different because of their differences in size, character, existing sustainability and the existing transport infrastructure.

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1 Setting the scene

This chapter describes the study's origins in the government's report "Delivering a Sustainable Transport System (DaSTS)". It sets out the aims of the study, and sets these within a national, regional and local policy context.

It introduces the concept of "Smarter Choices" – a key theme which runs through this report as it seeks to identify new and better ways to address two critical challenges: reducing carbon emissions and supporting economic recovery and growth.

1.1 Overview

Figure 1-1 gives an overview of the study process, linked to the different sections of this report.

1.2 Background to the study

The Government report *Delivering a Sustainable Transport System (DaSTS)*[1] explained how the government's approach to long term transport planning, set out in *Towards a Sustainable Transport System*[2], would be put into action. Its stated aims were to tackle immediate problems and to shape the transport system to meet longer term challenges.

The Government also published draft guidance[3] on the work that regions were invited to undertake to influence decisions on transport investment from 2014 onwards. This described the following stages of work:

1: Agreeing strategic priorities and work programme

2: Generating options

3: Sifting and packaging options

4: Deciding on overall programme

[1] Delivering a Sustainable Transport System: Main Report. DfT. November 2008.

[2] Towards a Sustainable Transport System. DfT. October 2007

[3] Draft guidance to regions on delivering a sustainable transport system, DfT, November 2008.

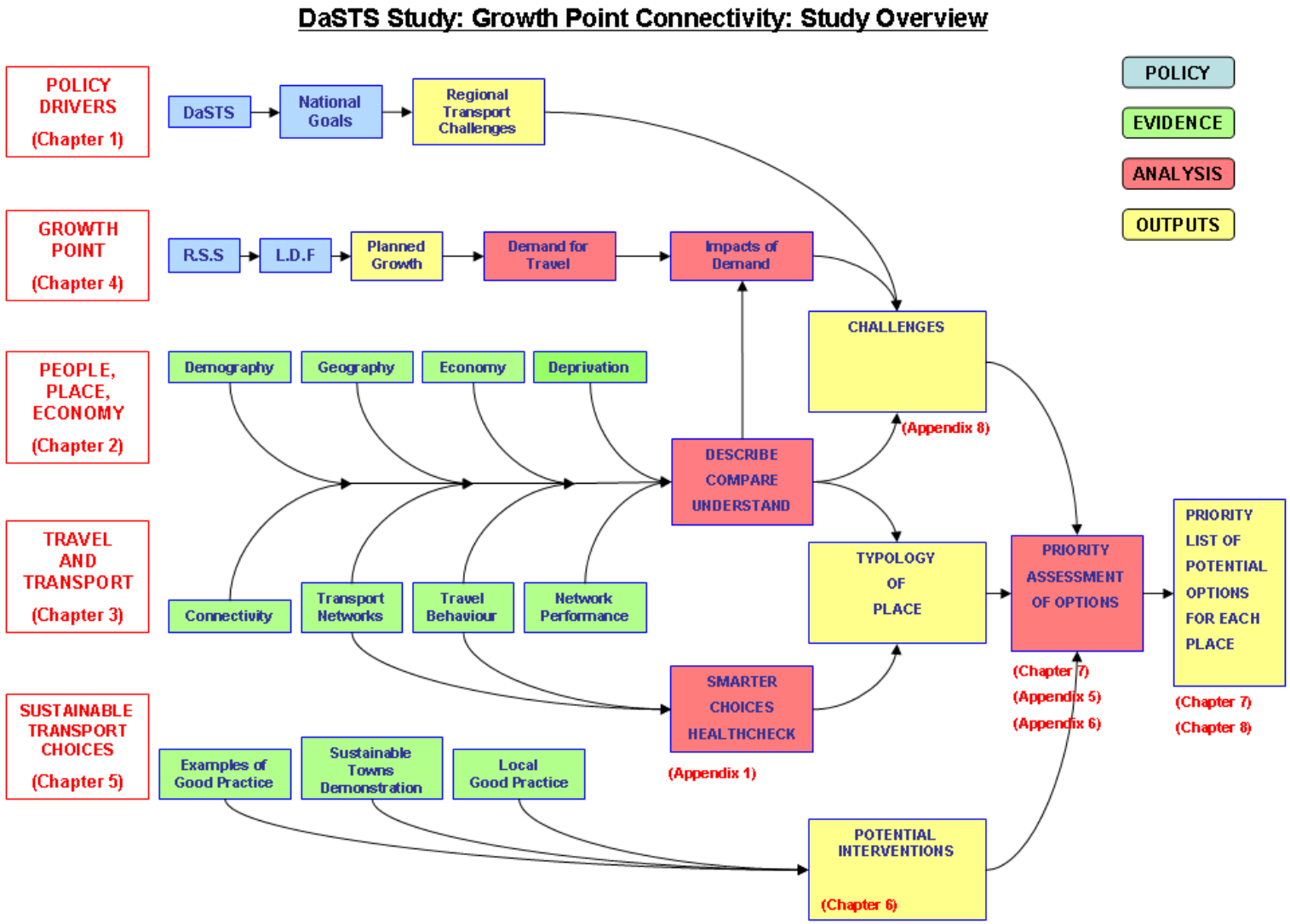

Figure 1-1 DaSTS Study Overview

In response, the West Midlands region submitted a Regional Work Programme[4] for approval. Subsequently the DfT approved four studies in the West Midlands:

- *Growth Point Connectivity*;
- *Improving Connectivity in Coventry North-South corridor*;
- *Improving Connectivity in North Staffordshire*.
- *Access to Birmingham*

DfT expectations for the DaSTS studies are confirmed in the subsequent full guidance[5].

This report describes the work which has been undertaken for the study: *Growth Point Connectivity*, up to and including the "Generating options" stage. It examines the challenges associated with growth locations, in particular Shrewsbury, Hereford and Telford, which have been designated as New Growth Points and Inward Investment Locations. It considers low-cost, specific and innovative sustainable transport interventions to address the transport issues associated with this growth, including smarter choices and initiatives to influence travel behaviour.

The study has been undertaken by Mouchel Ltd, having been commissioned by Shropshire Council on behalf of the West Midlands Leaders' Board and Advantage West Midlands.

1.3 Aims of the study

The aims of this study are:

- To understand the effect that the proposed housing and employment growth will have on the demand for travel in Hereford, Shrewsbury and Telford
- To consider how this demand for travel could be reduced
- To identify where sustainable modes of travel could be viable in these settlements, and suggest how any barriers to the use of such modes could be overcome
- To identify low-cost, sustainable transport options to support growth in the short to medium term, and further options for the longer term
- To identify examples of good practice which could have an application in locations with similar issues and problems

[4] DaSTS in the West Midlands: West Midlands Regional Work Programme, June 2009

[5] Guidance to regions on delivering a sustainable transport system, DfT, July 2009.

In other words, to help determine how Hereford, Shrewsbury and Telford can each have a bigger population, more homes and more jobs whilst also having a more sustainable, more affordable transport system.

Wherever possible this report has been arranged to allow comparisons to be made between the three settlements. Extensive use has been made of information from the 2001 census, from existing traffic models and the Trafficmaster database, presented in visual form. The purpose is not to have a "beauty competition", but to use these comparisons to highlight the particular characteristics of each place and to help us understand the reasons for any differences (or similarities).

In a similar way, this study aims to identify the broad impact of planned growth upon existing transport systems in each settlement. Information is drawn from existing transport models, and no new modelling has been done at this stage.

Finally, a comprehensive long list of potential generic interventions has been examined, with the aim of identifying the types of intervention likely to be most effective in each settlement. This initial sift has taken account of the baseline information for each place, the best practice examples and the DaSTS goals, and has been undertaken by representatives of the client and consultant team.

It is anticipated that further work will quantify the impacts of options and packages identified in this study and undertake a more detailed sift against DaSTS goals and national and local challenges.

1.4 National policy background

In recent years, Government transport policy has been driven by two fundamental issues:

- The urgent need to tackle global climate change
- The need for a healthy national economy

The **Stern Review**[6] into the economics of climate change found that the scientific evidence is now overwhelming. Climate change threatens the basic elements of life for people around the world - access to water, food production, health, and use of land and the environment. These are very serious global risks, and demand an urgent global response.

Stern also concluded (in 2006) that there is still time to avoid the worst impacts of climate change, if we take strong action now. The costs of stabilising the climate are significant but manageable; delay would be dangerous and much more costly. Thus, the benefits of strong, early action on climate change outweigh the costs.

[6] Stern Review: The Economics of Climate Change, 2006

Reducing the emissions of greenhouse gases from transport is one of the ways we can help to stabilise the climate and avoid the worst impacts of climate change.

The **Eddington Transport Study**[7] examined the long term links between transport and economic productivity, growth and stability. It confirms that transport is vital to the economy. However it does not propose "criss crossing the country with new transport links" but argues instead for a targeted approach to the most seriously congested parts of our urban, national and international networks. And he stresses that an innovative approach, which makes the most of existing networks through good regulation, and which sends the right price signals to users and transport providers, is likely to be just as important as further investment in new infrastructure.

In "**Towards a Sustainable Transport System**" (2008) the Government describes how it is responding to the recommendations in the Eddington study to improve transport's contribution to economic growth. It also sets out how transport will play its part in reducing carbon emissions as recommended by the Stern Review. It proposes a new approach to longer term transport strategy, following the recommendations of the Eddington study, and explains how engagement should take place with transport users, providers and stakeholders.

In **Delivering a Sustainable Transport System (Nov 2008)** the Government sets out a plan of action, based on five goals for transport:

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

DaSTS also identifies the main challenges arising from these goals. Foremost among these are the twin challenges of tackling climate change and economic growth at the same time.

Since 2008, the economic recession has brought into sharper focus the need to support economic regeneration and growth. At the same time, the fact that there is now less money to

[7] Eddington Transport Study, December 2006

invest in transport means that it is even more important to identify and prioritise those interventions which are affordable and cost-effective, without losing sight of the urgent need to tackle climate change, or of the other DaSTS goals.

The English Regions are responsible for generating options for interventions on the city and regional transport networks up to 2019 and beyond. This will build on the progress already made in developing Regional Funding Advice (RFA) and Regional Transport Strategies, and will link into work on Regional Spatial and Economic Strategies and emerging single Regional Strategies. It will help meet the need, identified in the Regional Transport Priorities Action Plan, to address transport issues to help unlock growth in the new Growth Points and Settlements of Significant Development.

Therefore, Department for Transport (DfT)'s *Guidance to regions on delivering a sustainable transport system* makes it clear that "the DaSTS approach presents regions with new opportunities to develop programmes which best support the sustainable economic and social development of the region, whilst taking account of the need to reduce carbon dioxide emissions. It will be important for the work to align not only with existing transport strategy, but also with wider regional strategies for economic development and land use."

Specifically, regions are expected to produce a prioritised funding programme for the period 2014-19, along with less detailed proposals for 2019-24, within the context of a 30 year plan and an analysis of the impact of the proposals on each of the DaSTS goals.

In order to do this, regions are expected to generate and consider a wide range of options, reflecting the five DaSTS goals, and addressing the challenges they pose. These need to demonstrate innovative thinking, and must be affordable and deliverable. The proposed study is part of the West Midlands region's response to this, the need for a study having been identified in the DaSTS Phase 1 Report: *Delivering a Sustainable Transport System in the West Midlands (2009)*.

Whilst the DaSTS approach requires the assessment of a wide range of options, it also encourages regions to do this in a proportionate manner. In particular, early sifting of options is recommended, so that time and money is not wasted on progressing interventions which are difficult to deliver, unaffordable or poor value for money.

Thus, the DaSTS studies are generally expected to follow four key stages:

- Reviewing the evidence and ensuring a clear understanding of the challenge
- to be met;
- Identifying a wide range of possible interventions to mitigate the challenge
- Sifting and comparing these options and identifying possible packages
- Appraising the most promising options and identifying possible packages to
- arrive at a preferred solution

1.5 Regional policy background

The **Regional Economic Strategy** (RES) for the West Midlands recognises that good access to employment and good connections between business and customers is essential to supporting sustainable growth. It recognises the need to tackle mobility in an integrated way, stating that:

"It is important that we encourage both the adoption of sustainable forms of transport and improvements to transport networks and services to help people access jobs and support business competitiveness, as well as reducing the impact our transport habits have on the environment. We also need to understand how we can get more capacity from our existing transport networks by managing them more effectively."

In relation to its strategic objective 2.5: "Sustainable Commnities", the focus of the RES is to:

"Encourage a network of high-quality, attractive and sustainable urban and rural communities which attract and retain a diverse and thriving workforce contributing to, and prospering from, the region's growing economy as well as having access to necessary amenities and a good quality of life."

The RES states that the rationale for this is:

" Successful, thriving and growing economies require a balanced and co-ordinated approach to housing and employment land development. This balance must be achieved across the region's diverse urban and rural communities in a way that reduces transport demands and energy use, meets people's evolving residential needs, and contributes to an environmentally effi cient and well-designed physical environment. Families and businesses will be attracted to communities which offer access to services, where all crime, including that against the person and business, is low, and which are welcoming to all sections of society."

The **Regional Spatial Strategy** (RSS) for the West Midlands was published in January 2008 by the Government Office for the West Midlands. It was guided by current policies, including the National Sustainable Development Strategy. Key issues were identified including the continued decentralisation of population and investment from the major urban areas and the need to create balanced and stable communities across the Region. It noted that rural areas have had insufficient economic activity and suitable housing development to support a balanced population, resulting in people leaving these areas or having to travel longer distances for work.

The RSS seeks to enable all parts of the region to meet their own needs in a sustainable and mutually supportive way. Telford, Shrewsbury and Hereford were identified as three of the five regional foci for new development, alongside Worcester and Rugby. The Regional Planning Guidance takes account of measures emerging from the recent Multi Modal Studies in the area, and sets a strategic framework to:

- ensure better integration between transport policies and priorities and the wider spatial strategy

- bring together the outcomes of the multi modal studies
- steer the development of the future local transport plans

Policy T1 seeks to improve accessibility and performance of the transport system whilst not perpetuating past trends in car traffic and trip length growth. It is recognised that education campaigns are needed together with encouraging those with jobs in areas to choose to live in those areas.

Policy T2 refers to reducing the need to travel, especially by car, and by reducing length of journeys. Developments should be encouraged where public transport, walking and cycling opportunities are maximised. Patterns of development should reduce the need for travel.

Policy T3 encourages walking and cycling through network development and priority.

Policy T4 seeks to promote travel awareness through co-ordination between local authorities, transport operators, and other stakeholders; supported by development plans and action from planning officers to reinforce the impacts. The next Local Transport Plan (LTP3) should include targets for work and school travel plan achievements.

Policy T5 encourages an integrated hierarchy of public transport outside the main urban areas, with priority given to improving services and interchanges, and links to catchment areas. The overall aim is to encourage frequent, reliable, secure and attractive public transport.

Car parking standards and demand management issues are covered in policies T7 and T8, but mainly apply to the main urban areas, with limited applicability to the three study settlements, although park and ride services are encouraged.

The RSS Examination in Public Panel considered the number of dwellings needed in each of the settlements. The Phase 2 Revision Report of the Panel (September 2009) identified a need for an increase between 2006 and 2026 of 25,000 dwellings in Telford, 6,500 in Shrewsbury and 8,500 in Hereford. Further dwellings were also expected in the regions around these settlements (a further 1,500 in the remainder of Telford and Wrekin, 21,000 in the rest of Shropshire, and 9,500 further in the rest of Herefordshire.

This requirement for further housing works leads to an expectation that traffic levels in the settlements will increase, at a time when there is also pressure to reduce transport spending.

The **West Midlands Regional Transport Priorities** (2007) identifies the sub regional priorities which are important in supporting regeneration and access to employment and other services through improving local transport links and addressing urban congestion. It confirms that the benefits of these priorities will be supported by encouraging and promoting smarter travel choices. Specifically it includes, as priorities:

- New Growth Points/ Settlements of Significant Development;

- Smarter Choices.

On smarter choices, it notes that:

"Smarter choices consist of a range of initiatives to change behaviour in favour of more sustainable, low carbon options such as: public transport, cycling, walking, car sharing, green travel planning etc. These measures can have the following impacts:

- *Reduced number of trips*
- *Change in time of travel.*

The DfT supported Sustainable Travel Town demonstrator project in Worcester has demonstrated the benefits of investing in this area. "

The West Midlands Region's response to DaSTS: **Delivering a Sustainable Transport System in the West Midlands** (2009) identified three headline themes as priorities for studies in the West Midlands:

- More sustainable communities across the West Midlands
- Better travel choices supporting a stronger, lower carbon economy
- More efficient and reliable journeys in urban areas and connecting the region

Four regional studies were proposed to address these priority themes. In subsequent discussion between the Region and Dft it was decided that one study would examine sustainable transport and smarter choices issues in the context of the Growth Point Strategy, which proposes significant housing and population growth in a number of settlements across the region, including Telford, Shrewsbury and Hereford.

The Comprehensive Spending Review 2007 led to the production of the West Midlands Regional Funding Advice Round 2. Regional Appraisal Summary Tables (RAST's) were submitted by each scheme promoter in the area. From 47 initial RASTs, 37 were taken forward to Stage B. The overall conclusion from the review was that the volume of transport improvements in the pipeline would exceed the available budget by a considerable amount, suggesting that delivery of many schemes would be delayed.

The following major schemes are under consideration in the study area:

- Shrewsbury NW Relief Road 2014-2016 (RFA Band 2)
- Hereford Relief Road 2013/2014 - 2021/2022 (RFA Band 2)
- Greyhound Link Road, Telford 2008/9 - 2009/10 (RFA unclassified)
- Telford Central Station MSCP 2011/2 (RFA unclassified band)

1.6 Local Development Frameworks

LDFs are in preparation in each of the study settlements. In general LDF more advanced in Telford and Hereford than Shrewsbury, apart from the issue of local siting of development, which is more advanced in Hereford and Shrewsbury than Telford.

Table 1-1 DaSTS Settlements LDF status

	Telford	Shrewsbury	Hereford
SHLAA done?	Yes	Yes	Yes
Latest Annual Monitoring Report	December 2009	For 2008 / 2009	For 2008 / 2009
Local Development Scheme	Revised from Oct 09	Examination Oct 2010 for adoption March 2011	From January 2008
Statement of Community Involvement	Adopted May 2006	Expected May 2010	Adopted March 2007
Area Action Plan?	Yes – Central Telford	No reference	Yes – Hereford

1.7 Smarter Choices Policy Background

In recent years, there has been a move away from the idea that transport systems should evolve in response to demand towards the idea that demand itself should be managed, so that transport systems are better able to cope. Put simply, we have come to realise that we can no longer afford to build enough capacity to cope with growing travel demand. Moreover, in some cases adding capacity can even create further travel demand, creating a vicious circle. There is a danger that trying to accommodate demand may create as many problems as it solves, by damaging the built and natural environment, and increasing emissions of greenhouse gases and other pollutants.

The idea of demand management is not new. Demand management occurs whenever physical or fiscal constraints are used to restrict and control people's use of scarce capacity – for example the use of road and bridge tolls, parking charges and traffic management systems, or the decision not to improve road capacity. Positive measures to manage demand include financial support for public transport services and investment in the infrastructure to support more sustainable forms of travel.

Today, we are faced with two critical challenges: to reduce carbon emissions and give a kick start to economic recovery. Not only do we have to address the potential conflicts between these two imperatives; we also have to do so at a time when transport spending is likely to be

restricted. For these reasons, attention is rightly being focused on the role of behavioural change - understanding and using a range of tools to encourage people to make different, more sustainable, choices about how when and where to travel. This, in simple terms, is the Smarter Choices agenda.

As with any shift in thinking, the new sits alongside the old. Plans are still being developed for new or improved transport infrastructure, including roads and public transport investment. Some of this investment may be affordable, but some may not be. Some of this investment may be needed, or highly desirable, but some may simply reflect an assumption of “business as usual”. It is wrong to think that nothing needs to change. But equally it would be a mistake to think that Smarter Choices is the only solution to our transport problems, or that it can remove altogether the need for investment in infrastructure.

A very important aspect of this study is to consider the role of Smarter Choices in the three study settlements as they address the issue of planned growth. This is considered in Chapters 5 and 6 and in the Appendices referred to therein.

Chapter 1: Setting the scene.

Summary

- *The need for this study was identified by the West Midlands Region as part of its response to the government's guidance to the regions on "Delivering a Sustainable Transport System".*
- *The aim of this study is to help determine how Telford, Shrewsbury and Hereford can each have a bigger population, more homes and more jobs whilst also having a more sustainable, more affordable transport system*
- *This study is informed by key national, regional and local policies and strategies including the five DaSTS goals, the Regional Spatial Strategy and the emerging Local Development Frameworks and Local Transport Plans.*
- *A key element of this study is to understand better the potential role of Smarter Choices both in the study settlements and similar places.*

Key challenges

The key national challenges are:

- *To reduce carbon emissions*
- *To support economic recovery and growth*

The specific challenges for the West Midlands which are particularly relevant to this study are:

- *Addressing the demand for travel resulting from new development, both employment and housing (WM4).*
- *Reducing the need for travel (WM7).*
- *Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8).*

2 The way things are now: people, place and economy

This chapter looks at the physical and socio-economic characteristics of each of the study settlements: Telford, Shrewsbury and Hereford to give a distinct picture of each place. It draws on a range of data sources including national census data, economic statistics and information from existing plans and policies. These also reveal how each place sees itself, now and in the future.

A key principle of this study is that we can learn both from the similarities and from the differences between the three study settlements.

2.1 Local demography and geography

The location of the study settlements is shown in Figure 2-1. Each is the main administrative centre of a larger unitary authority:

Table 2-1 Administrative Centres

Administrative centre	Unitary authority
Telford	Telford and Wrekin
Shrewsbury	Shropshire
Hereford	Herefordshire

Population

Hereford, Telford and Shrewsbury are three of the principal settlements in the more rural western part of the West Midlands region. Telford is larger than the other two towns, and has a lower population density.

Table 2-2 Census Population Statistics

	Telford	Shrewsbury	Hereford
Population (2001)[8]	138,241	70,689	50,400
Area (hectares)	4,180	1,951	1,553
Population density	33.1	34.4	36.3

[8] Office of National Statistics, KS01 Usual resident population: Census 2001, Key Statistics for urban areas

[9] Some 43 million people live in settlements larger than Telford, and 23 million in settlements smaller than Hereford

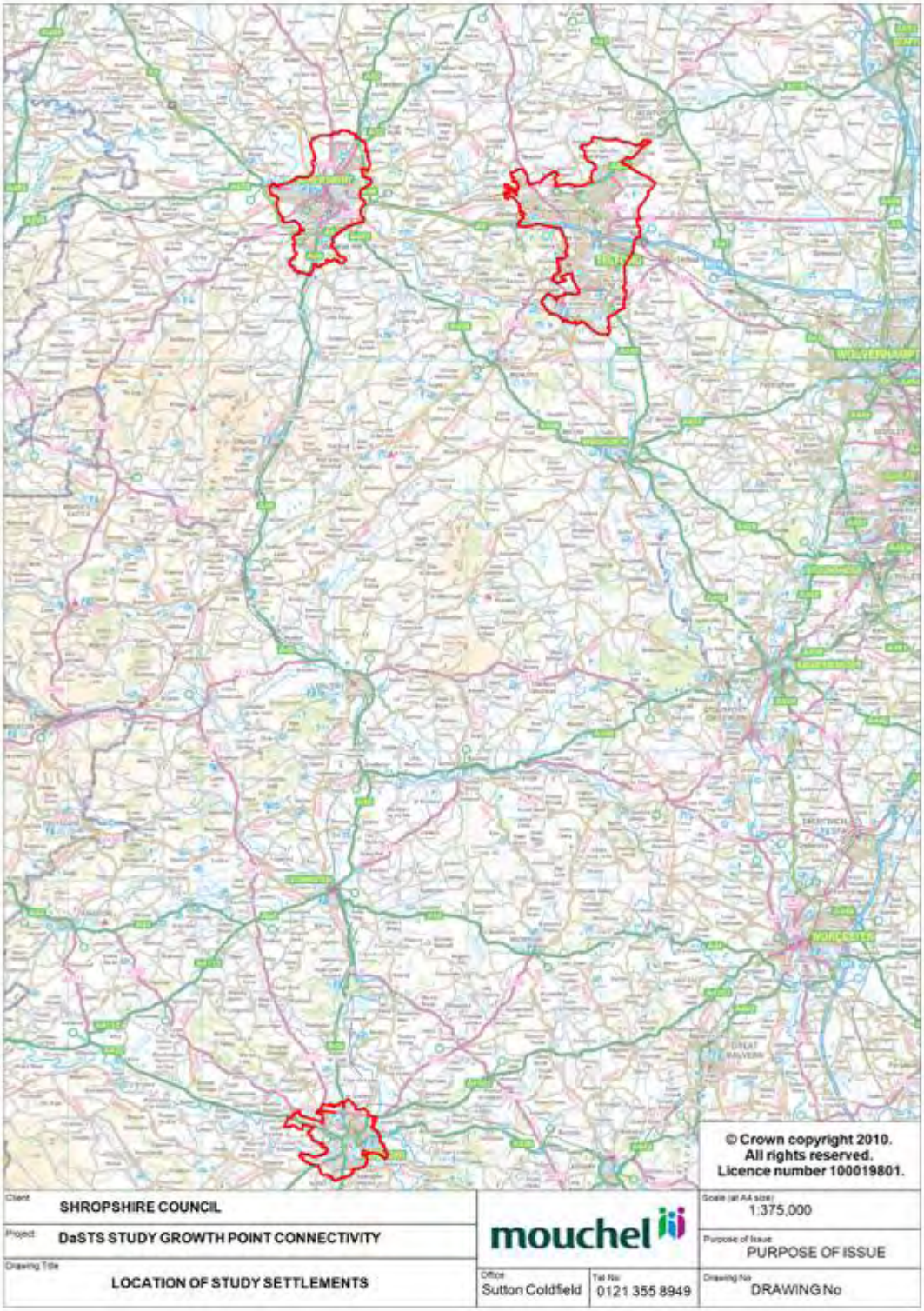

Figure 2-1 Location of Settlements

Of the 2,616 settlements in England and Wales identified in the 2001 census9, 143 are within the population range delimited by the populations of our three study settlements (50,400 – 138,241). The settlements in this range have a total population of over 12 million (15% of the population of England and Wales). This is equivalent to the combined population of the Greater London and West Midlands urban areas.

There are several other free standing settlements of similar size in the West Midlands region. These include Worcester (93,700), Redditch (79,216), Kidderminster (55,348), Stourbridge (55,480), Stafford (63,681), Rugby (61,988), Burton-on-Trent (64,449), Tamworth (74,531), Nuneaton (70,721), and Newcastle-under-Lyme (73,944).

What happens in these medium sized settlements is important because a significant number of people live and work in just such places.

Age structure

Telford has a slightly younger population than Shrewsbury or Hereford.

Table 2-3 Age Structure

	Telford	Shrewsbury	Hereford
Average age	36 yrs	39 yrs	39 yrs

Car ownership

Hereford has a lower level of car ownership than either Shrewsbury or Telford, and fewer people in Hereford own two or more cars. More people in Telford own two or more cars than in either Shrewsbury or Hereford.

Table 2-4 Car Ownership

	Telford	Shrewsbury	Hereford
No car	24%	24%	27%
1 car	46%	49%	49%
2 or more cars	30%	27%	24%

Tourism

Tourism is an important factor in all three of the study areas. Information on the number of day visitors is only readily available at District (or former District) level, so comparisons between the three settlements cannot easily be made. The figures here for Telford and Wrekin include the Ironbridge Gorge World Heritage site. Those for Herefordshire include other towns such as Ross and the Wye Valley as well as Hereford.

Tourism helps support the local economy in all three areas. Good access, particularly by road, helps attract visitors and encourage repeat visits. Tourists and visitors are usually less familiar with the area than local people, and may make more use of facilities such as Park and Ride. The quality of the environment in town or city centres, especially for pedestrians, can enhance the enjoyment of a visit and lead to increased spending.

Table 2-5 Visitor Statistics

	Telford & Wrekin	Shrewsbury and Atcham	Herefordshire
Annual day visitors	1,971,000	1,375,000	2,979,000

Physical characteristics of the settlements

Figures 2-2 to 2-4 show the main physical form of each of the study settlements.

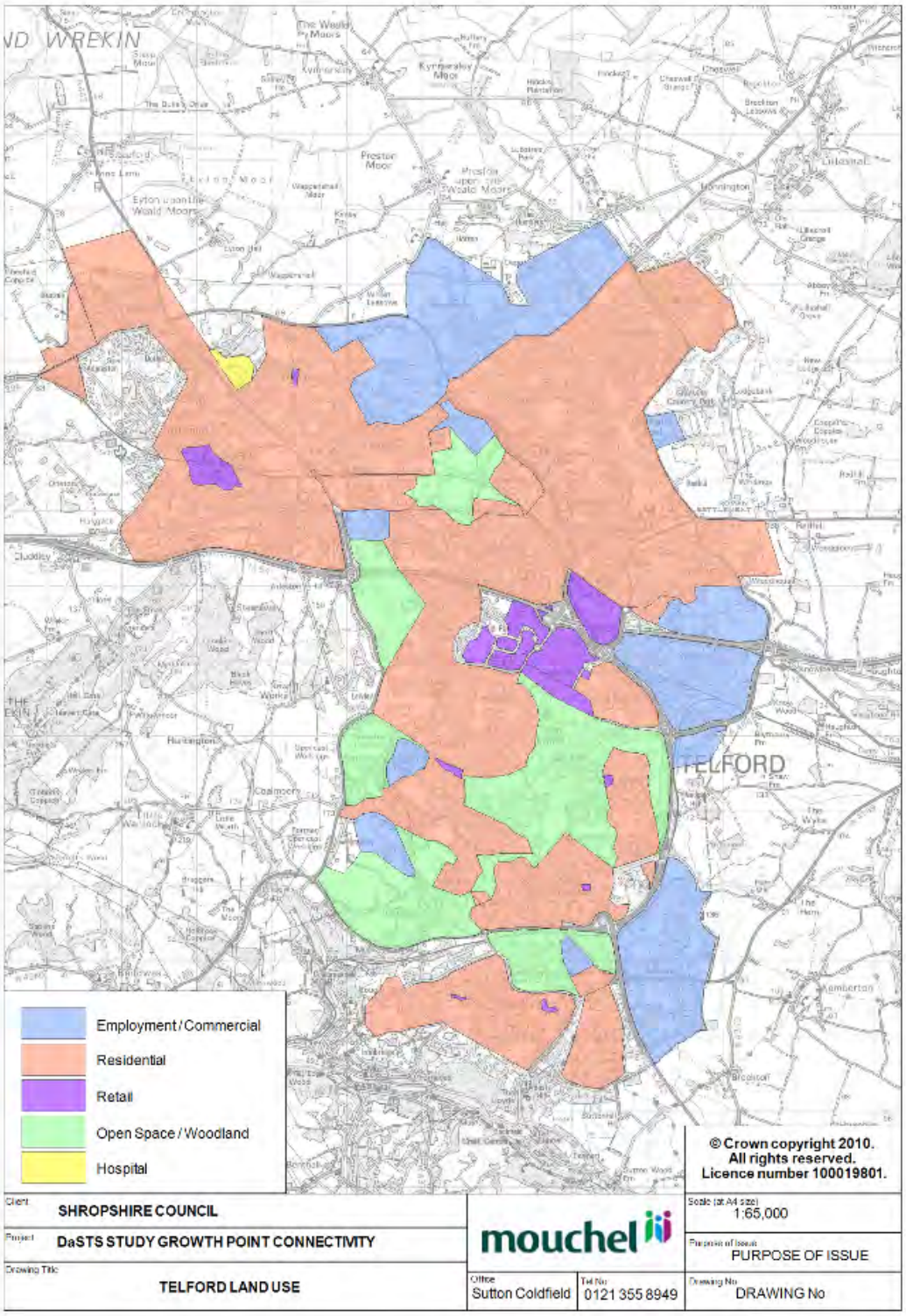

Figure 2-2 Physical Form of Telford

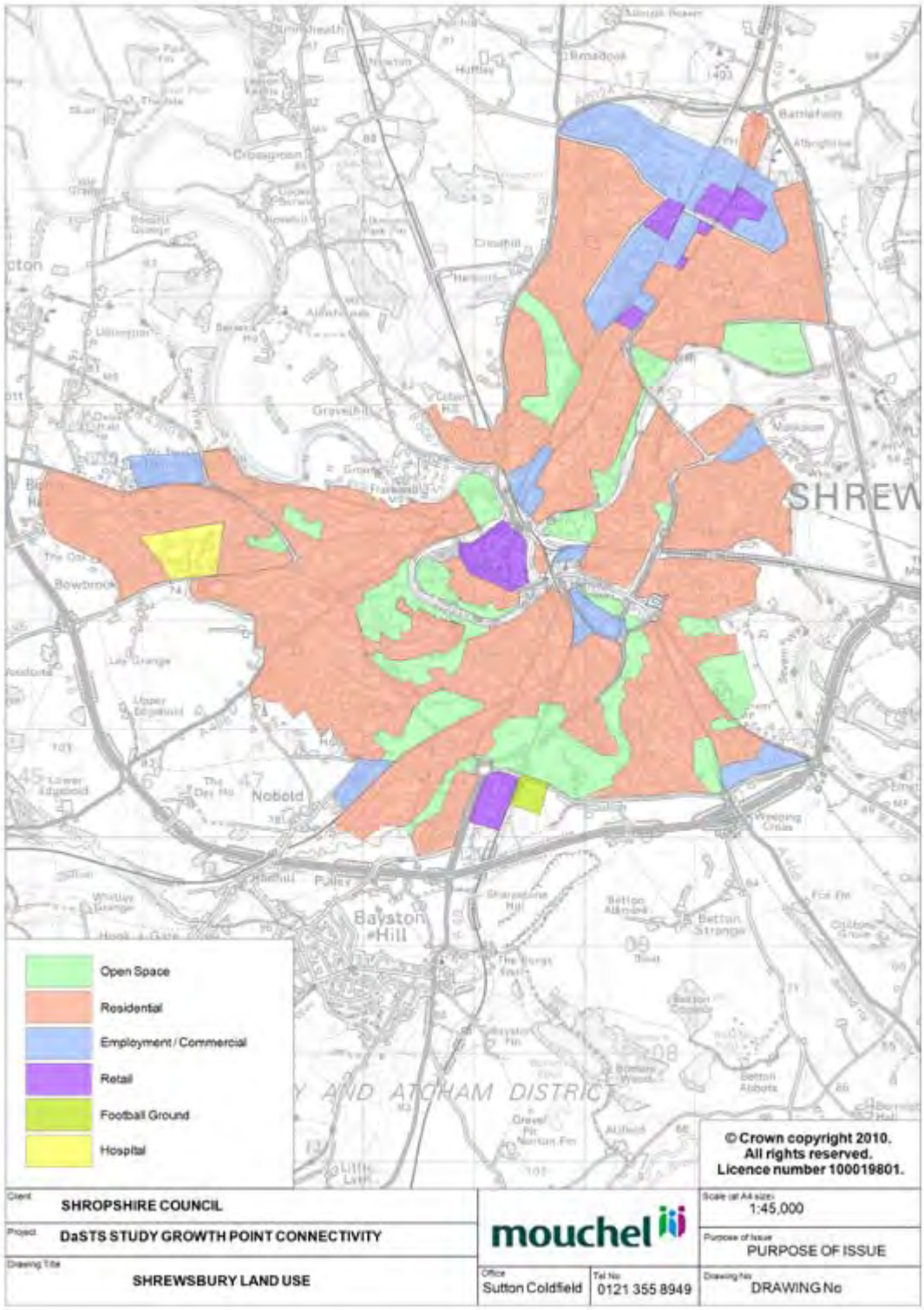

Figure 2-3 Physical Form of Shrewsbury

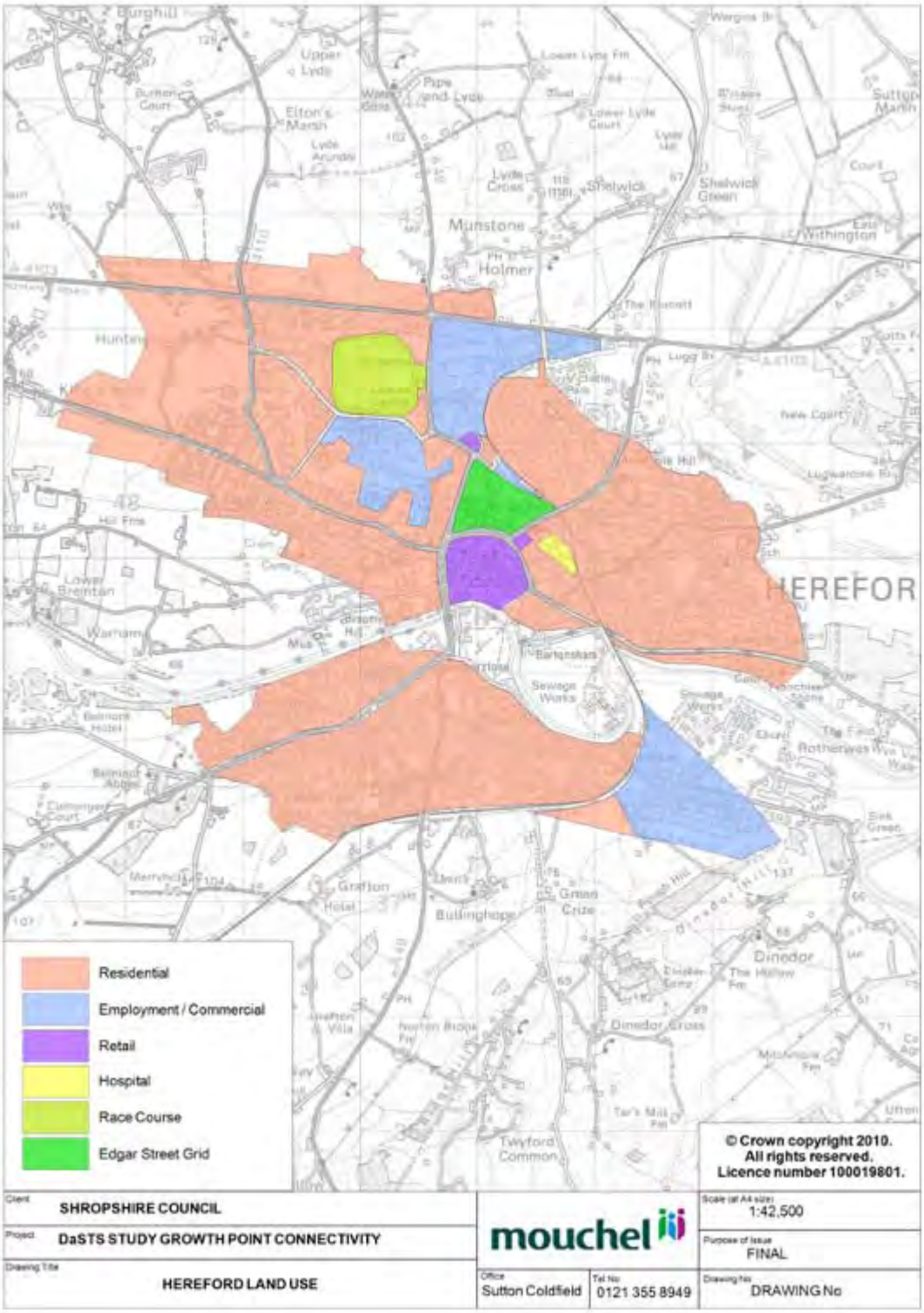

Figure 2-4 Physical Form of Hereford

Telford lies approximately 33 miles west of Birmingham, 17 miles west of Wolverhampton and 15 miles east of Shrewsbury. It was developed as a New Town in the 1960s and 1970s on land previously used for industry and agriculture. As with other planned towns of that period, Telford was created from the merger of several existing settlements including the towns of Wellington, Oakengates, Madeley and Dawley. These old towns still retain their individual identity and a strong sense of place within the New Town, alongside the newly developed areas.

At the geographic centre of Telford is a modern shopping mall, and an very extensive Town Park, providing a contrast with the built development.

The M54 motorway was completed in 1983, forming a high quality road link to the M6 and the West Midlands conurbation. Four motorway junctions link into a network of modern high capacity roads connecting the various parts of the town.

The Birmingham – Wolverhampton – Shrewsbury railway line runs through the town with stations at Oakengates, Telford Central and Wellington.

To the south of Telford, and included in the study area, lies the River Severn and the Ironbridge Gorge, a UNESCO World Heritage Site. This area around Coalbrookdale and the Shropshire Coalfield saw the beginnings of the Industrial Revolution. The nearby Ironbridge Power Station now relies on coal imported by road.

The traditional industries of mining, ironworking and ceramics have now been replaced by the new industries which have been attracted to the Telford, which is one of the fastest growing towns in the United Kingdom.

Telford is built on fairly level ground, and the Severn runs along its southern boundary. Its present day layout is a consequence of the interactions and compromises between its industrial legacy and modern planning, rather than of its natural geography.

Telford's defining physical characteristics are its polycentric design, together with the enclosed and privately owned town centre, low density layout, segregated modern housing and industrial areas and the modern non-radial road system.

Employment and commercial areas tend to be completely separate from the main residential areas. The main physical barriers to movement are the transport routes themselves, which are mainly high capacity links.

Shrewsbury is an historic market town about 12 miles east of the Welsh border, 15 miles west of Telford and 47 miles west of Birmingham. Its defining physical characteristic is an almost complete natural loop of the River Severn within which the mediaeval town grew up. The river loop now encloses the present day town centre which has three principal points of entry and a largely unaltered mediaeval street pattern. Adjacent to the town centre and within the loop is the riverside Quarry Park.

Shrewsbury has over 660 listed buildings, which, like the town centre roads, have been adapted over many centuries to serve present day purposes whilst retaining something of their original character.

Present day Shrewsbury extends over a much wider area, with development from the 19th and 20th centuries extending outwards from the river loop. There are out-of-town supermarkets and shopping centres to the north (Tesco at Harlescott) and south (Sainsburys at Meole Brace). Some traditional industry remains in the northern part of the town, and there are newer employment areas at Battlefield and London Road. Shrewsbury serves as a cultural and commercial centre for Shropshire and a large area of mid-Wales.

Shrewsbury lies at the intersection of the A5 and A49 trunk roads. A 1930's bypass of the A5 now forms part of a partial inner ring road. In the 1990s, new outer bypasses were built on the south and east sides of the town, effectively setting the limits for further development, and the A5 was realigned to form a high capacity link to the M54 at Telford.

Shrewsbury's one railway station lies to the north of the town centre at the intersection of no less than five railway lines.

Shrewsbury is moderately hilly, with land rising away from the river. The north-west sector is undeveloped, forming a "green wedge" into the town with no western bypass or river crossing. The study area includes the large village of Bayston Hill, which lies on the A49, just south of the A5 bypass.

Shrewsbury's defining physical characteristics are its historic town centre constrained by the river loop and its traditional radial road system, on which has been superimposed both an inner and outer bypasses.

Hereford is an ancient cathedral city at a crossing of the River Wye, about 16 miles east of the border with Wales and 21 miles south-west of Worcester, the nearest town of similar size. It is the centre for a large rural area, which extends beyond rural Herefordshire and into mid-Wales.

The city itself is compact and self-contained. The attractive city centre retains much of its historic street pattern and contains the 11th Century cathedral and numerous historic buildings. Parkland and playing fields alongside the Wye provide a green wedge into the centre.

The Wye divides the city into two parts, with the main city centre in the northern part. The A49 Greyfriars Bridge is the only vehicular crossing of the Wye within the city, or indeed for some distance either side. It links the southern areas of the city with the city centre and areas to the north. There are two further pedestrian bridges, one of which carries the Great Western Way cycle route.

There are traditional employment areas near to north of the centre. To the south-east is the Rotherwas Industrial Estate which employs some 2,000 people. The recently opened Rotherwas Link Road provides direct access to this estate from the A49 south of the city.

Hereford lies at the intersection of the A49 and A465 trunk roads and the A438. The A4103 runs through the northern edge of the town, and is developed on both sides. The A49, A465 A438 all pass through the city, as there is no bypass. A partial inner ring road allows traffic to avoid the historic centre, which is partially pedestrianised.

Hereford lies on the Welsh Marches railway line (Newport to Shrewsbury) from which there is also a route to Worcester. The city's one railway station is located on the north side of the city centre.

Hereford is on fairly level ground. Its defining physical characteristics are the historic city centre, the division of the city by the River Wye with only one bridge, and the original radial road system with no outer bypass.

2.2 Housing

The existing supply of housing in each place, and the increases planned for each place under the Growth Point Strategy, are detailed in Chapter 4.

2.3 Economic Overview

Output

A broad indication of the level of economic activity and growth in the three study settlement is given by the measured GVA[10]. Unfortunately this is only available at Unitary Authority level, rather than for the specific study settlements.

Table 2-6 Gross Value Added (GVA) per head

GVA per head (£)	2002	2007	% change
Telford & Wrekin	14,820	18,792	26.8
Shropshire	11,572	14,093	21.8
Herefordshire	12,465	15,175	21.7
West Midlands	14,075	17,044	21.1
England	16,123	20,430	26.6

[10] Gross Value Added, a measure of the output of all goods and services

Table 2-7 Gross Value Added (GVA) per employee

GVA per employee (£)	2002	2007	% change
Telford & Wrekin	29,951	36,411	21.6
Shropshire	29,274	37,632	28.5
Herefordshire	32,941	35,478	7.7
West Midlands	32,060	38,801	21.0
England	32,256	45,436	25.5

In **Telford and Wrekin** GVA per head of population lies between the regional and national averages and has grown rather more rapidly than either in recent years. However GVA per employee is significantly below the national or regional averages, and its recent growth has been well below the national average.

Research by ONS, reported by the Regional Observatory, confirms that low productivity is an issue, although its effects on GVA per head of population are partly offset by the relatively high proportion of the population who are in employment.

In **Shropshire**, GVA per head of population is much lower, well below the regional and national averages, and has also grown more slowly than the national average in recent years. GVA per employee in Shropshire is also below regional and national averages, but in this case recent growth performance has been relatively strong, though this pattern may not of course be entirely reflective of the situation in Shrewsbury itself.

Research by ONS confirms that the relatively low levels of productivity per employee largely explain the area's low GVA per head of population. Net commuting outflows are also an explanatory factor, offset by the relatively high proportion of the population which is in employment.

In **Herefordshire**, GVA per head of population is slightly higher than for Shropshire, but still below regional and national averages. GVA per employee (in 2007) was the lowest of the three areas. On both measures, especially the latter, growth has been relatively slow in recent years.

Research by ONS, indicates that GVA per head of population in Herefordshire is boosted by high activity rates, but depressed by the combination of net out-commuting and low productivity, though the latter will be distorted by the relatively high levels of part-time working.

Put simply, all of the three study settlements presently have productivity levels (as measured by GVA) which are below the national average. Only Telford achieves productivity above the

regional average. GVA growth over the period 2002 to 2007 has been strongest in Telford and Wrekin. GVA per employee has grown most in Shropshire, and least in Herefordshire.

Comparable information at town or city level is not available.

Investment

Since 1994, **Telford and Wrekin** has attracted over 100 inward investment projects, creating over 8,000 new jobs[11]. On the positive side, projects now appear typically to be well integrated into the local economy and, although there have been job losses, there has not been the scale of reductions which might have been expected in the recession within such "branch plants".

Shropshire, by comparison, has a very modest record in securing foreign investment with just 17 projects[12] and 1,000 new jobs attracted since 1994. However Shrewsbury itself has seen strong growth in commercial floorspace in recent years[13], probably largely as a result of the development of new business parks.

Inward investment to **Herefordshire** has also limited, with just 14 overseas investment projects since 1994, creating fewer than 300 jobs.

Put simply, Telford has received far more inward investment over the past 16 years than Shropshire whilst Herefordshire has had less.

Employment

The three settlements differ greatly in terms of the employment sectors represented in each place.

[11] West Midlands Regional Economic Assessment, Telford and Wrekin, WMRO October 2008

[12] West Midlands Regional Economic Assessment, Shropshire, WMRO October 2008

[13] 30% in Shrewsbury and Atcham between 1998 and 2007, offset by a 9% fall in "other" floorspace. Neighbourhood statistics reported by the Regional Observatory

Table 2-8 Employment Sectors

	Telford %	Shrewsbury %	Hereford %
Agriculture and fishing	0.2	0.1	0.6
Energy and water	0.1	0.8	0.5
Manufacturing	20.0	5.9	12.5
Construction	2.4	3.6	3.0
Distribution, hotels and restaurants	20.6	26.3	29.8
Transport and communications	3.7	4.9	3.2
Banking finance and insurance	23.2	12.5	13.1
Public admin, education & health	26.5	41.0	32.5
Other services	3.3	4.9	4.8
TOTAL	**100.0**	**100.0**	**100.0**

Of the three study settlements, Telford has a far higher proportion of manufacturing industry than Shrewsbury, which is heavily dependent on public administration, education and health services for its economic base. Telford also has a bigger share of banking, finance and insurance than either of the other places. There are more differences than one might expect between Shrewsbury and Hereford, with Hereford having a significantly higher proportion of manufacturing industry.

The labour market

Table 2-9 Labour Market Statistics

	Telford & Wrekin %	Shropshire %	Herefordshire %	WM region %	UK %
Av. earnings 2009 (workplace based)	£430	£406	£383	£456	£489
Av. earnings 2009 (resident based)	£399	£468	£402	-	-
Unemployment 2009	6.5% (males)	3.9% (males)	3.7% (males) 1.5% (females)	7.5% (males)	5.7% (males)
Of which long term unemployment	7.5%	9.0%	8.1%	15.5%	13.6%

In simple terms, wages are lower for people working in all three study settlements than for people in the region or nationally. People working in Telford earn more than people working in Shrewsbury, whilst people working in Hereford earn least.

People *living* in Shropshire however have average earnings of £468, much closer to the national average and above the regional average. This indicates that people choose to live in Shropshire and commute to much better paid jobs elsewhere. The same is true for Herefordshire, though to a more limited extent. For Telford, those living in the district have even lower average earnings, suggesting that quite a few people come to Telford to work, whilst its own residents tend to be lower paid.

The unemployment rate in Herefordshire is well below the regional and national average, and Shropshire has a similarly low rate. Despite this, it is clear that in Hereford there has been a range of impacts on income and local expenditure within service outlets, with significant numbers of retail and other small business closures.

Telford and Wrekin has suffered severe unemployment in previous economic downturns. In the current recession, however, whilst the unemployment rate in the area is worse than the UK average, it remains slightly better than the region as a whole. Long term unemployment is lower in Telford and Wrekin than in either Shrewsbury or Hereford, and less than half the regional average.

Based on discussions with economic development officers in each council, the key economic policies relevant to each settlement are briefly summarised below:

Economic development policies – Telford

The Council's Economic Development Strategy and Community Strategy are both somewhat dated. Whilst many elements of these strategies remain in place, there have been several changes since they were adopted, and this brief review seeks to reflect the current position. A new Economic Development Strategy is to be prepared, and work is currently under way to prepare the supporting local economic assessment.

For Telford especially, maintaining the flow of inward investment is crucial if employment growth is to match the job needs of people who will be living in the area as implied by RSS housing growth targets. However there is an increasing emphasis on working with existing businesses, as major inward investment opportunities become scarce and competition from lower cost locations intensifies.

The Council's key priorities for Telford include:

Transforming the town centre to provide a more genuine "heart" for the area, offering 18 hours of life and activity each day: To do this, the Council aims to remove the physical and perceived constraints caused by the box road which is seen as a barrier to movement into the centre. A greater mix of office, retail and residential development is proposed. The deliberate aim of this policy is not just to create economic activity generally, but also to underpin efforts to make Telford more attractive to graduates and to help efforts to secure additional inward investment.

Developing high quality employment sites for high value end users: Whilst the area has an extensive stock of employment land, better sites are needed and the Council has been working with the Homes and Communities Agency on this. Many of the existing industrial sites are somewhat "tired" and run down and need investment for renewal.

Creating high wage jobs in new industries (the "New Industries, New Jobs Agenda"): Telford has some specific strengths in specialist sectors such as polymers and building technologies which could be built on. The challenge is therefore to create clusters of activities based around these. The current economic development strategy also identifies advanced engineering, ICT, specialist business and professional services and food and drink as potential clusters for development.

Tourism is also seen as an important priority, not just for the Ironbridge Gorge World Heritage Site, but also based around the Telford International Centre which is close to the town centre and is the sixth largest exhibition centre in the UK, hosting a range of entertainment and sporting events. This helps promote the area to potential investors, as well as bringing expenditure into the local economy. New hotels providing additional bed space for the area and the enhancement of the town centre are the key components of the strategy to stimulate business tourism.

Economic development policies – Shrewsbury

Shropshire Council is currently in the process of preparing a Local Economic Assessment to meet the new statutory requirements. The Council's current policies emphasise both the

attraction of inward investment (via “Invest in Shropshire”) and support for existing businesses.

Sectoral support relevant to Shrewsbury is focused on:

- The creative industries, working with “Creative Shropshire”
- Environmental Technologies, working with SetNET, the Shropshire Environmental Technologies Network
- Social Enterprise, working with “Partners for Social Enterprise”
- Tourism, working through the Shropshire and Telford Destination Marketing Partnership

Economic development policies – Hereford

The focus of policy by Herefordshire Council is on the generation of higher quality economic opportunities to address the problems of low productivity and earnings. This links in particular with the need to retain more young people within the area.

There is also likely to be a need to replace jobs which are vulnerable within the manufacturing sector, and the prospective impacts of the contraction of the public sector. Though there is a broad base of small firms, a high proportion of these have no great aspirations to grow further, and this is a problem.

Specific areas for action are:

- An inward investment strategy, focused on attracting small high tech firms with growth potential
- Bringing forward more and better employment sites, including making more land available at Rotherwas Industrial Estate.
- The Edgar Street Grid redevelopment which aims to transform 40 ha of underused low value use sites, including the cattle market, to the north of the city centre. The proposed private sector led development will provide a mix of retail and leisure floorspace, housing and higher education development.
- Working to secure a greater range of higher education provision, partly through the Edgar Street Grid project.
- Encouraging new Council contractors to offer more apprenticeships.
- Encouraging more office-based training.

Economy – implications for transport and growth

The local economies of three study settlements are very different.

In simple terms, **Telford** is an industrial town, even though almost all traces of the traditional industries that once thrived in the area have gone. It has no significant natural resources, nor is it a port where trade might naturally be focused. In a very real way, Telford is a construct; a place deliberately created in order to attract and support new industry. Its only significant resources are the skills and experience of the people who live and work there, the entrepreneurship of the companies which are based there, the drive and focus of local, regional and national government, and the physical and other infrastructure which supports this activity.

Telford's transport network reflects the raison d'être of the town itself. From the creation of the M54, to the development of a free flowing network of distributor roads, it has been designed to keep things moving - to get people to work, materials to factories and products to markets.

For these reasons, Telford's vision for improving transport addresses both internal and external connectivity. New infill housing and commercial development is seen as a way of securing better public transport, cycling and walking facilities by creating greater densities of movement to improve the viability of public transport. There are plans to create a new, more direct link between the M54 and the town centre, (the Greyhound Link) in order to permit major redevelopment. Aspirations for external links include the development of a business airport to the east of Telford, improved links between the M54 and the M6, passenger rail improvements and further railfreight development.

The economy of **Shrewsbury** is largely based on services and public administration. Tourism is also important. As the town has grown, its traditional radial transport network has been overlain by a semi orbital pattern of distributor roads and bypass, together with improved pedestrian and cycle networks and park and ride, to keep things moving in the outer areas and ensure access to the historic centre by all modes, including Park and Ride, thereby reducing car dependency. Current aspirations include a north-west relief road to remove all through traffic from the centre and facilitate the release of housing sites around the town and employment land in the west of the town, support regeneration objectives in the north and encourage greater footfall, regeneration and investment in the centre.

The growth of **Hereford** is seen in part as a means of creating a greater critical mass of expemditure as a basis for encouraging the expansion of service sector activities. The scale of planned growth is proportionally greater than in the other two places and is seen as a challenge, in transport terms, given the level of congestion presently reported on the city's traditional radial road network. Existing regeneration plans for the Edgar Streed Grid include provision of a new link road to improve access and reduce severance within the city centre. A long standing aspiration to provide a new relief road (in effect an A49 bypass) is seen as a way of reducing congestion and improving access to new development and the Rotherwas

employment area. Strategic aspirations, perhaps beyond the scope of this study, include the provision of better rail services and a Railfreight depot at Rotherwas.

2.4 Deprivation

Figure 2-5 shows the most deprived 20% LSOA's for the West Midlands Region, alongside detailed locations of the LSOA's at this level in Herefordshire and Telford.

With the West Midlands Region, Birmingham, Sandwell and Stoke on Trent are all within both the top 20 most deprived English local authorities by rank of average score, and by rank of average rank (DCLG 2007). However, Telford and Wrekin has several relatively large areas of deprivation whilst Herefordshire has one area to the South and West of the main city centre. Whilst in overall terms, most significant deprivation is in the major urban areas, there are pockets similarly in some of the other settlements of similar size to those considered in this Study, principally in the settlements in Warwickshire and Staffordshire (Nuneaton, Tamworth and Burton on Trent for example).

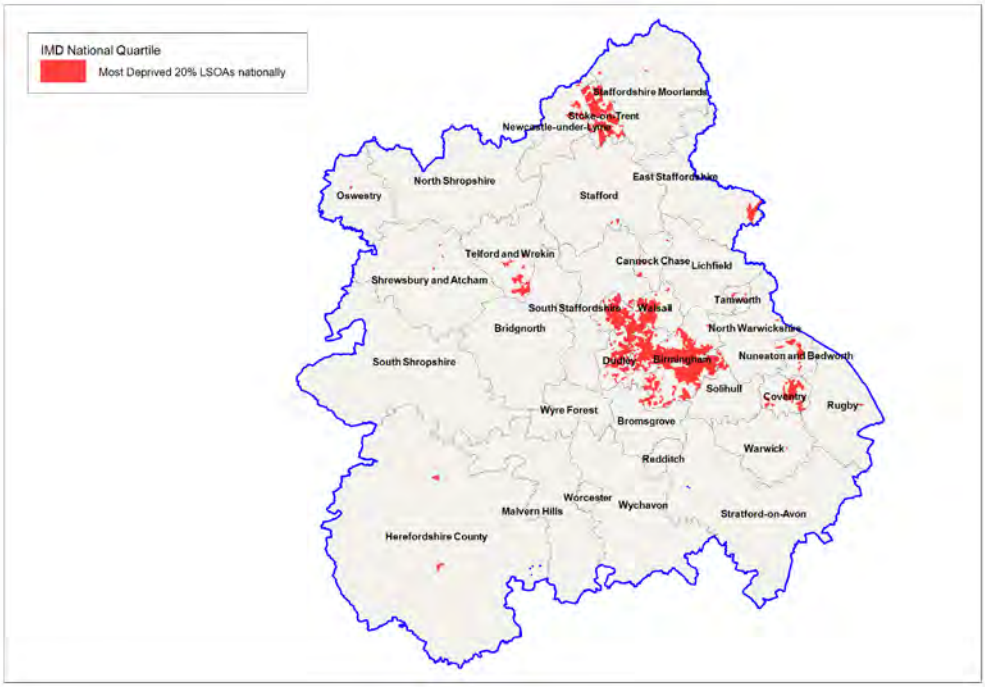

Figure 2-5 Most Deprived 20% of LSOAs in West Midlands

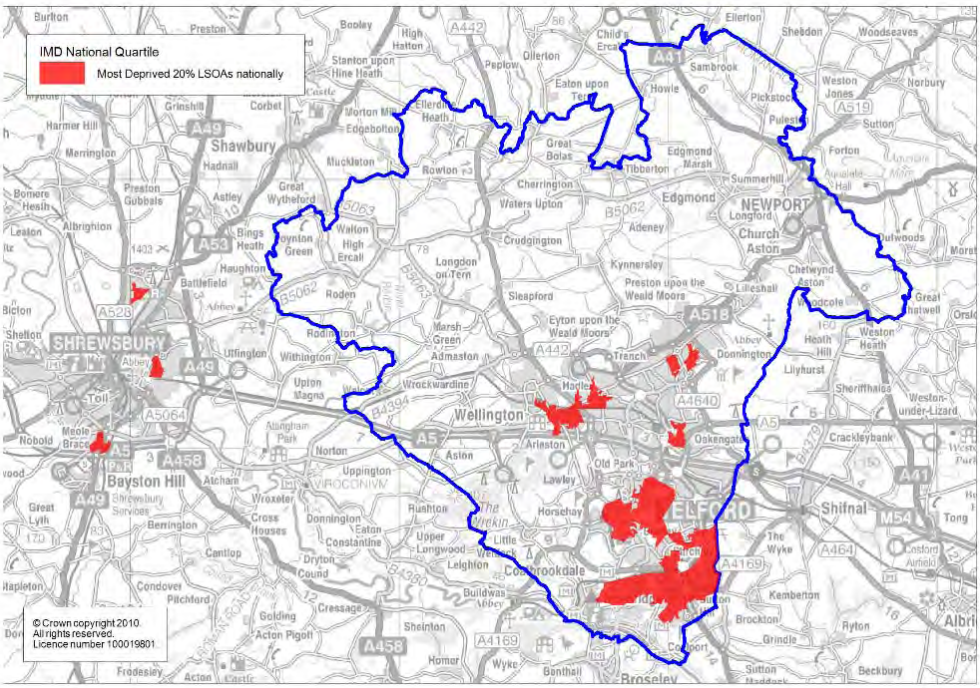

Figure 2-6 Most Deprived 20% of LSOA's in Telford

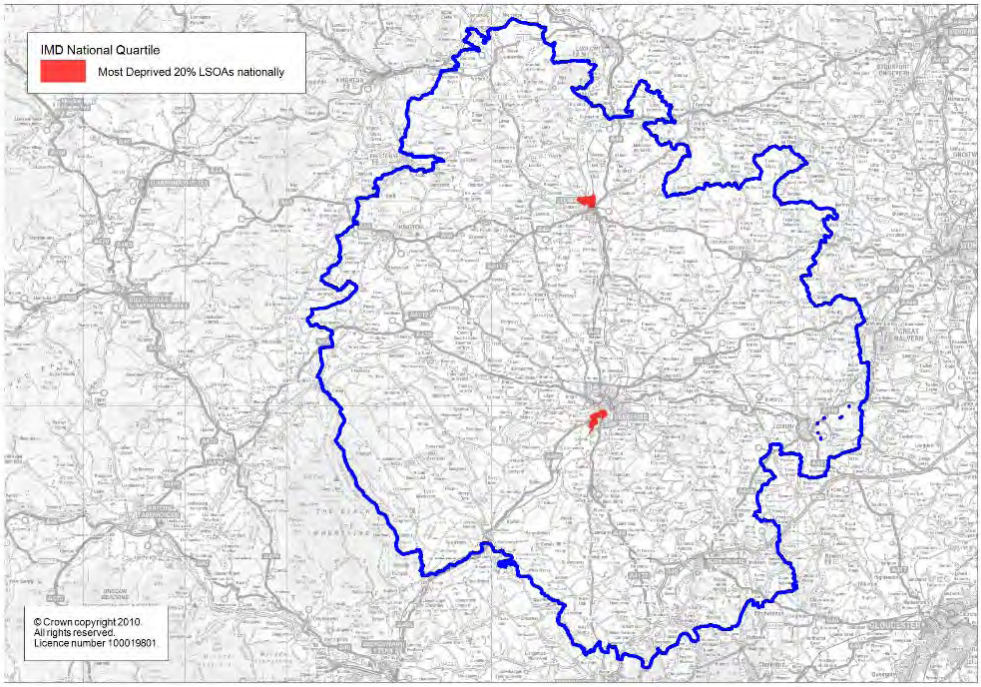

Figure 2-7 Most Deprived 20% of LSOA's in Hereford

Telford is seen as a relatively deprived area, falling within the 30% most deprived districts in the region on the Index of Multiple Deprivation 2007[14]. It is the 113th most deprived Local Authority area in England (out of 354).

The area performs below average on most domains of the index, especially on Education, Skills and Training and on Crime. Around 6% of the population of Telford live in areas ranking among the 10% most deprived areas nationally (two areas in Woodside, two in Malinslee, College and Brookside). Figure 2-6 highlights these areas.

Shrewsbury presents fewer problems of deprivation, but there are three areas of the town which fall into the 20% most deprived areas nationally, based on the Index of Local Deprivation 2007[15]. [Need to add on plan]

The one domain of the index on which a significant proportion of *Shropshire* is in the 20% most deprived areas nationally is Barriers to Housing and Services, reflecting the distance people in rural areas need to travel to services and the relatively high house prices, which may themselves be driven by commuting and retirement-led migration.

Hereford is relatively free of major concentrations of deprivation, with just 5 small areas of the city falling in the worst 20% nationally. Figure 2-7 highlights these areas.

Rural Herefordshire scores badly on Barriers to Housing and Services, for similar reasons to Shropshire described above.

The links between transport connectivity and deprivation are not as well understood as perhaps they could be. Another of the DaSTS studies: “Regional Accessibility and Regeneration” will address some of these areas and may help to identify any of the drivers of deprivation related to transport connectivity. This will be of relevance to Phase 2 of this Growth Point Connectivity study.

2.5 Air quality and carbon

Shrewsbury and **Hereford** both have air quality management areas (AQMA) within their central areas (Figure 2-8). **Telford** does not. The only other information currently available on carbon emissions is limited to that which is available from the DfT’s DaSTS data book. This shows total carbon emissions at a district level only, and does not give information separately for the three urban areas which are the specific subject of this study.

[14] Source: CVG

[15] Source: Regional Assembly

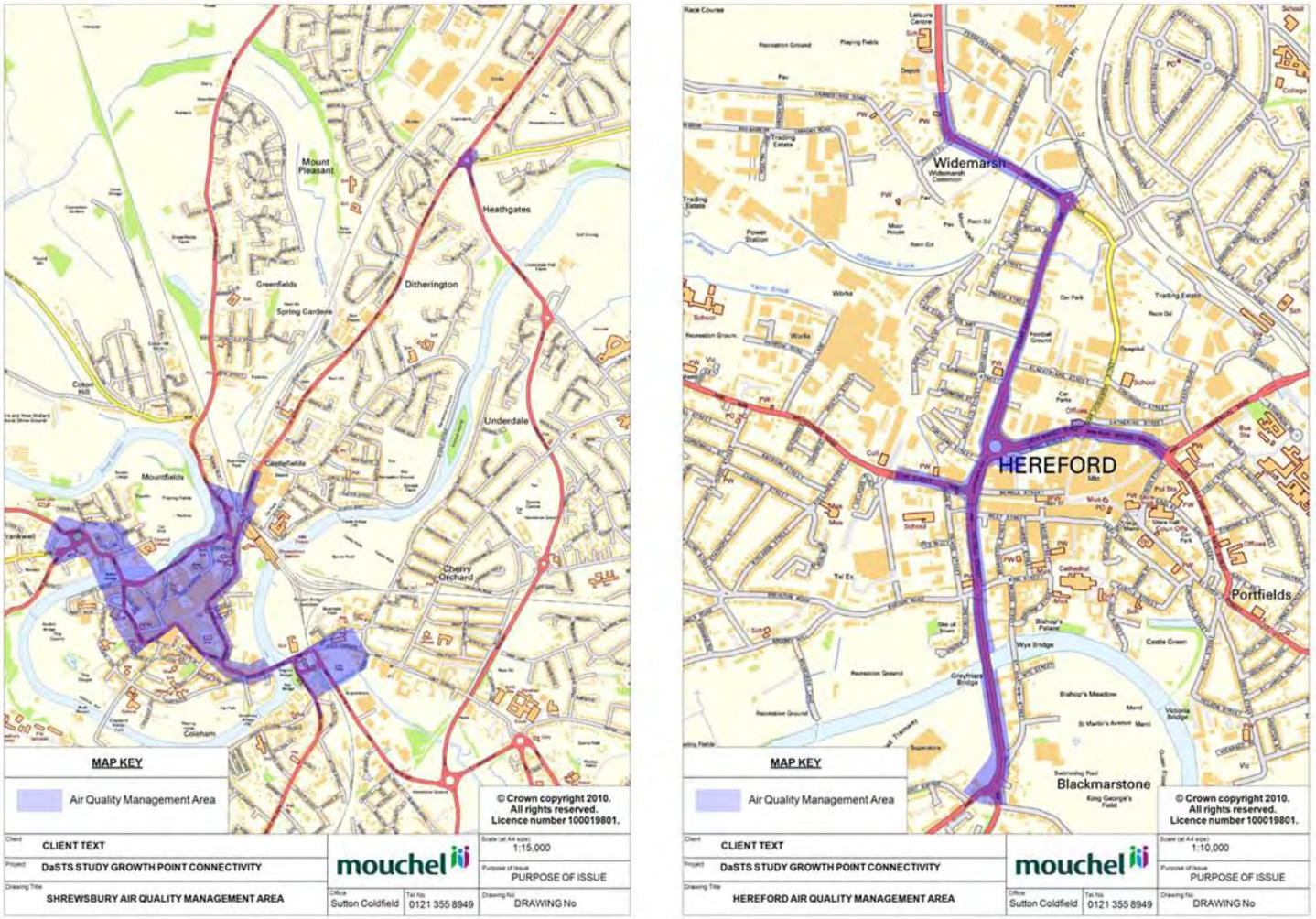

Figure 2-8 Shrewsbury and Hereford Air Quality Management Areas

In simple terms, transport carbon emissions will be more or less proportional to the distances travelled by motorised modes of travel. Thus, developments which generate trips by car will increase carbon emissions, whilst.measures which reduce car trips or distance travelled will generally reduce carbon.

In Phase 2 of this study, the carbon impacts of potential packages of options will be examined in more detail.

Chapter 2: The way things are now: people, place and economy

Summary of key findings

- *The three study settlements are typical of many such towns and small cities across the region and the UK*
- *Telford is the largest of the three, and is distinctive in that it is a new town, planned as a centre for manufacturing and designed around access by car*
- *Earnings are below the UK and regional average in all three places, but unemployment is relatively low.*
- *Telford has by far the largest and most varied employment base, but has more deprivation than the other settlements studied*
- *Hereford and Shrewsbury are similar historic settlements, but Shrewsbury has a much more developed transport system superimposed on its historic street layout. Both are severed by rivers, but crucially Hereford only has one principal bridge whereas Shrewsbury has several.*
- *Telford and Hereford have plans for major town centre regeneration.*

Key challenges

The key challenges are:

- *In Hereford and Shrewsbury, to respect and enhance their historic character and strong sense of place, whilst allowing their economies to grow.*
- *In Telford, to maintain and strengthen its economic base, using growth to reduce deprivation and transform the town centre without reinforcing its car-based culture*

Gaps in evidence

Possible gaps in the evidence are:

- *There is only limited evidence on the link between economic growth and transport connectivity. There is a concern that housing growth could occur without commensurate growth in jobs.*

3 The way things are now: travel and transport

This chapter brings together a wide range of evidence on the ways people travel in each of the study settlements, and provides an insight into the reasons for the travel patterns we see today.

It considers the connectivity of each place to other parts of the region, and examines the degree of self-containment that each place exhibits. The existing networks are described for each mode of transport, and we look in detail at the use made of each mode in the three places, highlighting key differences between them.

This analysis, presented graphically, shows how people's transport choices differ both between and within settlements, giving pointers to the ways in which housing and employment growth could affect transport sustainability in the future.

We also look at the performance of the transport networks in each settlement, providing an insight into existing problems and opportunities which need be taken into account as each place prepares for housing and employment growth.

3.1 Connectivity

Figures 3-1 and 3-2 show the main transport connections to each settlement. The uncongested flow journey time by car between each of the study settlements and other nearby towns or cities is shown in Table 3-1 below:

Table 3-1 Uncongested Flow Car Journey Times

From: / To:	Telford	Shrewsbury	Hereford
Telford		22 min	1 hr 26 min
Shrewsbury	22 min		1 hr 21 min
Hereford	1 hr 26 min	1 hr 20 min	
Worcester			43 min
Wolverhampton	25 min	44 min	
BIRMINGHAM	37 min	1 hr 10 min	1 hr 28 min
BRISTOL			1 hr 19 min
LONDON	2 hr 40 min	2 hr 59 min	3 hr
Birmingham Airport	50 min	1 hr 10 min	1 hr 30 min
Manchester Airport		1 hr 40 min	
Cardiff Airport			1 hr 30 min

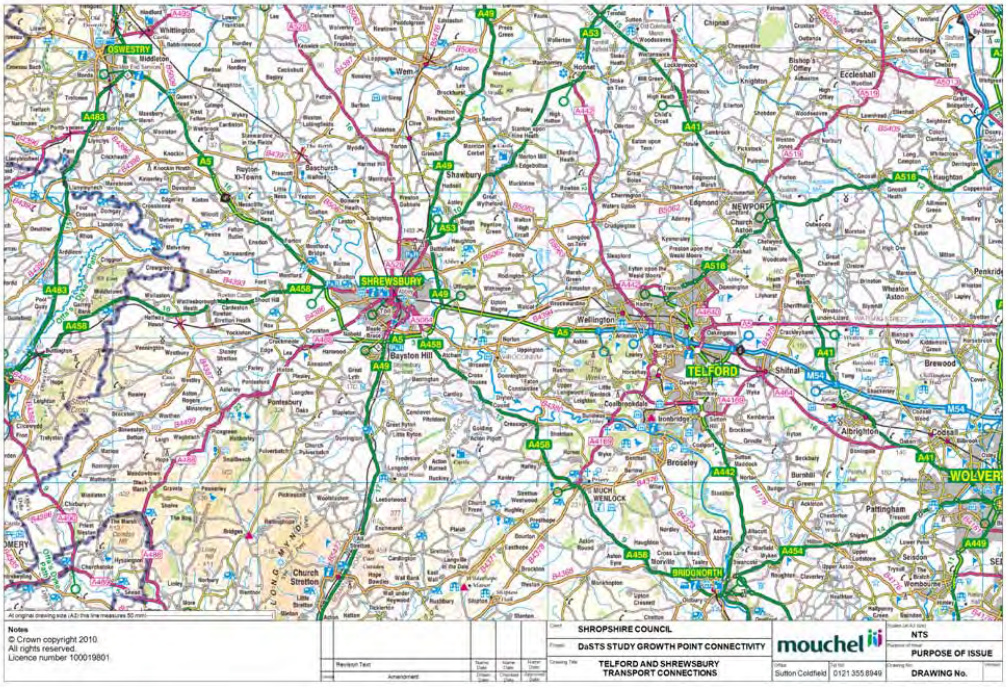

Figure 3-1 Telford and Shrewsbury Transport Connections

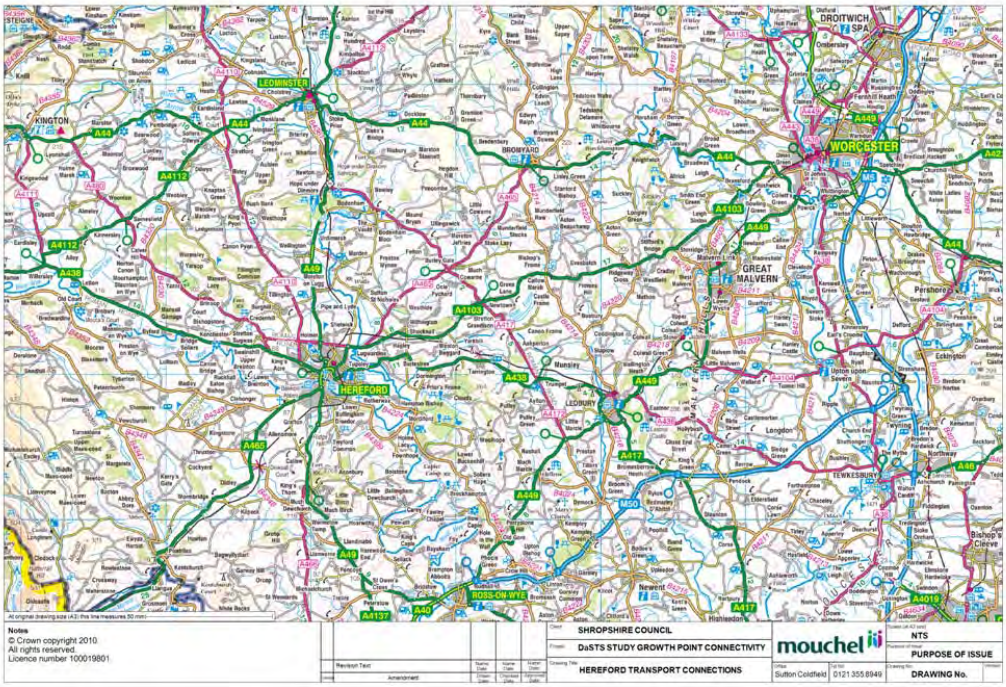

Figure 3-2 Hereford Transport Connections

Timetabled journey times by train are similarly set out below:

Table 3-2 Train Journey Times

From: / To:	Telford	Shrewsbury	Hereford
Telford		21 min	1 hr 27 min
Shrewsbury	21 min		54 min
Hereford	1 hr 27 min	54 min	
Worcester			43 min
Wolverhampton	23 min	43 min	
BIRMINGHAM	42 min	1 hr 2 min	1 hr 32 min
BRISTOL			1 hr 17 min
LONDON	2 hr 15 min	2 hr 35 min	3 hr
Birmingham Airport	1 hr	1 hr 20 min	2 hr
From: / To:	**Telford**	**Shrewsbury**	**Hereford**
Manchester Airport		1 hr 10 min	
Cardiff Airport			2 hr 10 min

On this basis, times by road or rail are broadly similar, (though these tables are not intended to examine this but merely indicate in the simplest possible terms how well connected each settlement appears to be).

Telford is the most accessible of the three settlements by road. Shrewsbury and Wolverhampton are within easy commuting distance (less than half an hour by car or train) whilst Birmingham can be reached in well under an hour.

From **Shrewsbury**, Telford can be reached in less than half an hour by car or train, and Wolverhampton in less than an hour. However Birmingham is just over an hour away by car or train.

Hereford's nearest town of similar size is Worcester, less than an hour's drive or train journey away. The nearest large city is Bristol (just over an hour's travel away). Birmingham is about an hour and a half away.

It takes about 3 hours to drive from Hereford or Shrewsbury to **London** whereas the time from Telford is some 20 minutes less. Telford has the fastest access to London by train, Hereford the slowest.

Telford has rail or road access to Birmingham International Airport within an hour by either mode. Shrewsbury's access to Birmingham International Airport is marginally longer for both modes, whilst for Hereford the time is between 1.5 and 2 hours, the longer time being by train in all cases. Hereford people can choose to use Cardiff airport, which has remarkably similar times to Birmingham International even though the rail journey includes a coach transfer. Shrewsbury people can also choose Manchester airport, in which case the rail time is less than car, partly related to the direct cross-platform interchange between trains compared to the more tortuous road route. Train times are similar to those to Birmingham, but times by road are longer.

Put simply, Telford is well connected to its nearest neighbours and the West Midlands conurbation by both road and rail, Shrewsbury rather less so. Hereford is more remote, by most measures, and is closer to Bristol than to Birmingham.

3.2 Existing local transport links

This section describes the main components of the transport system in each settlement. It focuses on the infrastructure and services available to people for their journeys. Subsequent sections of the report examine the travel choices people actually make and the consequent use and performance of the various networks.

Roads

Figures 3-3, 3-4 and 3-5 show the local road networks in each of the three towns.

Telford straddles the M54 motorway, from which four full junctions provide access to and from different parts of this dispersed polycentric settlement. It was laid out in the 1960s and early 1970s, when it was expected that the car would be the dominant form of transport (as

has proved to be the case). A network of high standard distributor roads form a large, irregular grid pattern linking the older centres (Wellington, Oakengates, Madeley, Dawley) to the newer residential and industrial areas. Elements of the historic road network have been incorporated into that of the new town, including former A5 London-Holyhead road, and roads within the older centres. The main Telford Town Centre is enclosed within a box road which links the main car parks and bus station and provides servicing access to the town centre. The town centre box road creates a physical and perceived barrier between the shopping centre and the surrounding area. Close to the town centre, the link between the M54 and the A442 (part of the town's distributor network) is very convoluted, and this is seen as a constraint on development and part of the raison d'être for the proposed Greyhound Link.

Overall, Telford has a high capacity, relatively free flowing road network, and this is one of the town's defining characteristics. It is easy to drive between different parts of the town, but the road network can also create severance between adjacent areas, cutting through communities and separating residential and employment areas. The road network serves a low density new town layout with circulatory road systems on the "Radburn" estates in the south of the town. Many key services, including further education, hospitals and retail parks are located in the northern part of the town.

Shrewsbury's road layout has at its core the historic town centre, almost fully enclosed within a loop of the River Severn and accessed by the two principal bridges as well as the northern access point, close to the station. Within the town centre, several of the main shopping streets have been enhanced as part of the historic core zone scheme.

Beyond the town centre, the traditional radial road pattern is augmented by a partial ring road, formerly part of the A5 and A49 trunk roads. To the south and west of the town this single carriageway route is a traditional 1930s bypass, with houses eitherside and small roundabouts. To the east it comprises purpose built single carriageway roads with no direct access and a 60 mph speed limit. At most times of the day this partial ring, which links some of the town's main housing, employment and retail centres, schools and hospitals, is fairly free flowing and allows easy access between different sectors of the town.

Further out, there are bypasses on the south-west and eastern sides of the town. These carry longer distance through traffic and their construction in the 1990s enabled the inner ring to function more freely.

There is no bypass or ring road on the north-west side of the town. This means that through traffic as well as local traffic between the west and northern sectors of the town has to use the all-purpose radial routes (which are also residential streets and pass through secondary shopping areas). Within the river loop, the through traffic uses the Welsh Bridge, Smithfield Road and the gyratory system near to the bus and railway stations, creating congestion at peak periods. These issues are the drivers behind the proposals for a North-West Relief Road.

Hereford also has a radial road network, but there is no bypass for the main north-south movement on the A49 which still passes through the city. The is only one functioning road

bridge which carries the A49 over the Wye on a dual carriageway and provides the only link for all traffic between the north and south of the city.

The A49 is diverted around the historic core of Hereford, but this leaves the city centre "boxed in" by busy roads. Within the historic core, several streets have recently been pedestrianised.

The river forms a significant barrier for road based journeys, and access between the Rotherwas Industrial area and residential areas to the north of the city is particularly difficult; this is seen as a restraint on development. This is a key driver behind the proposals for a Hereford Relief Road.

With a relatively under developed highway network, there are problem with traffic, including HGVs, passing through residential areas.

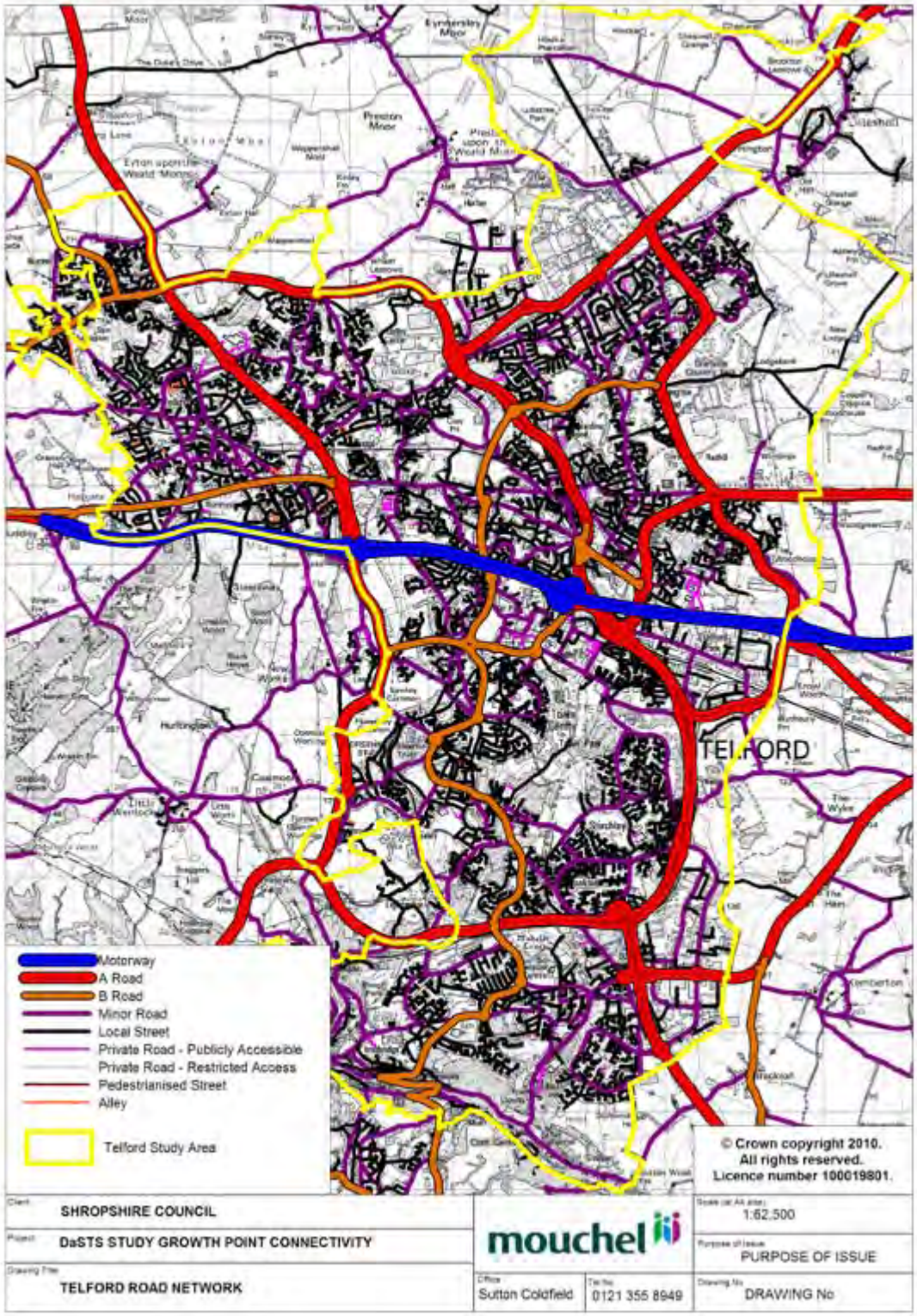

Figure 3-3 Telford Road Network

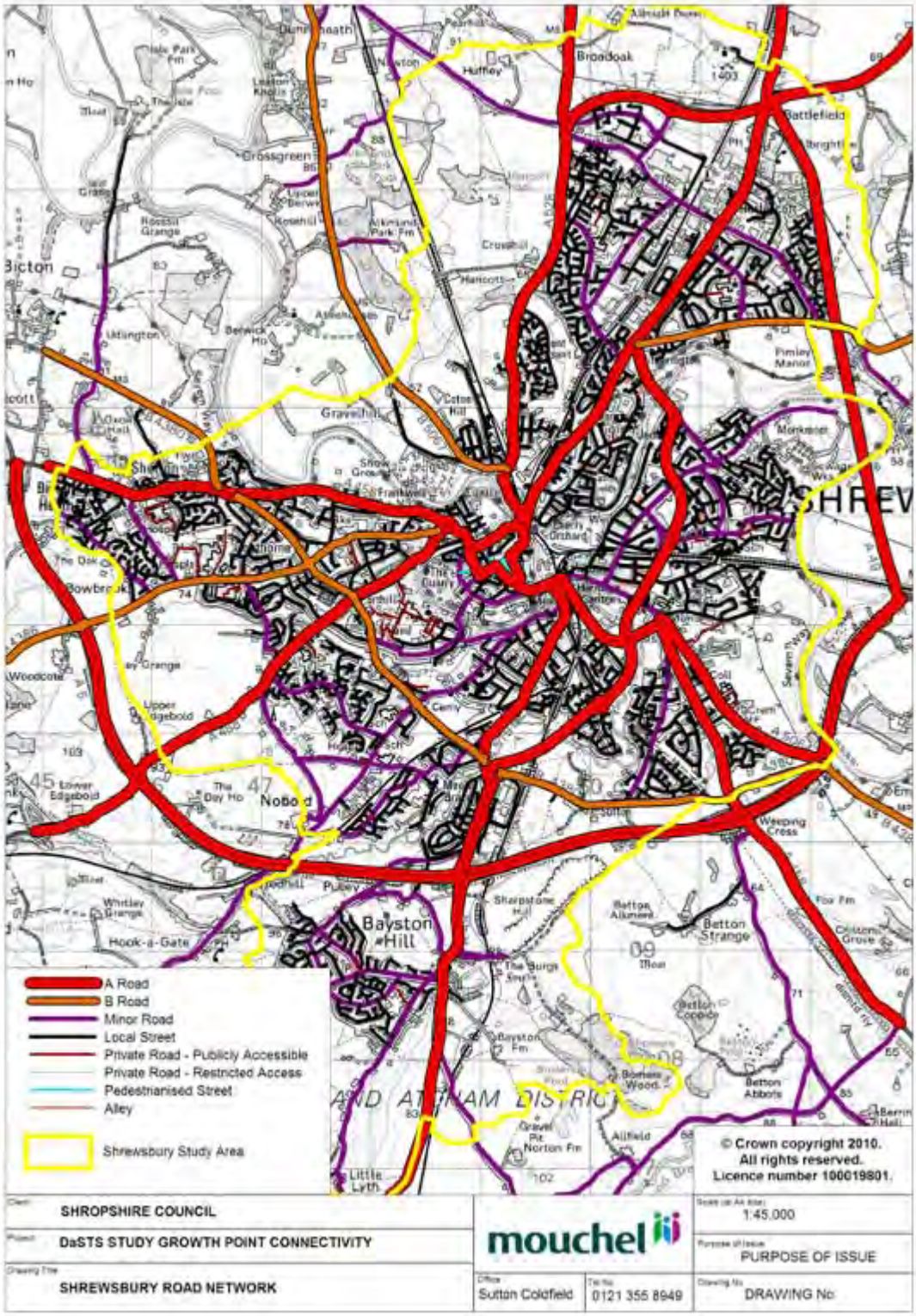

Figure 3-4 Shrewsbury Road Network

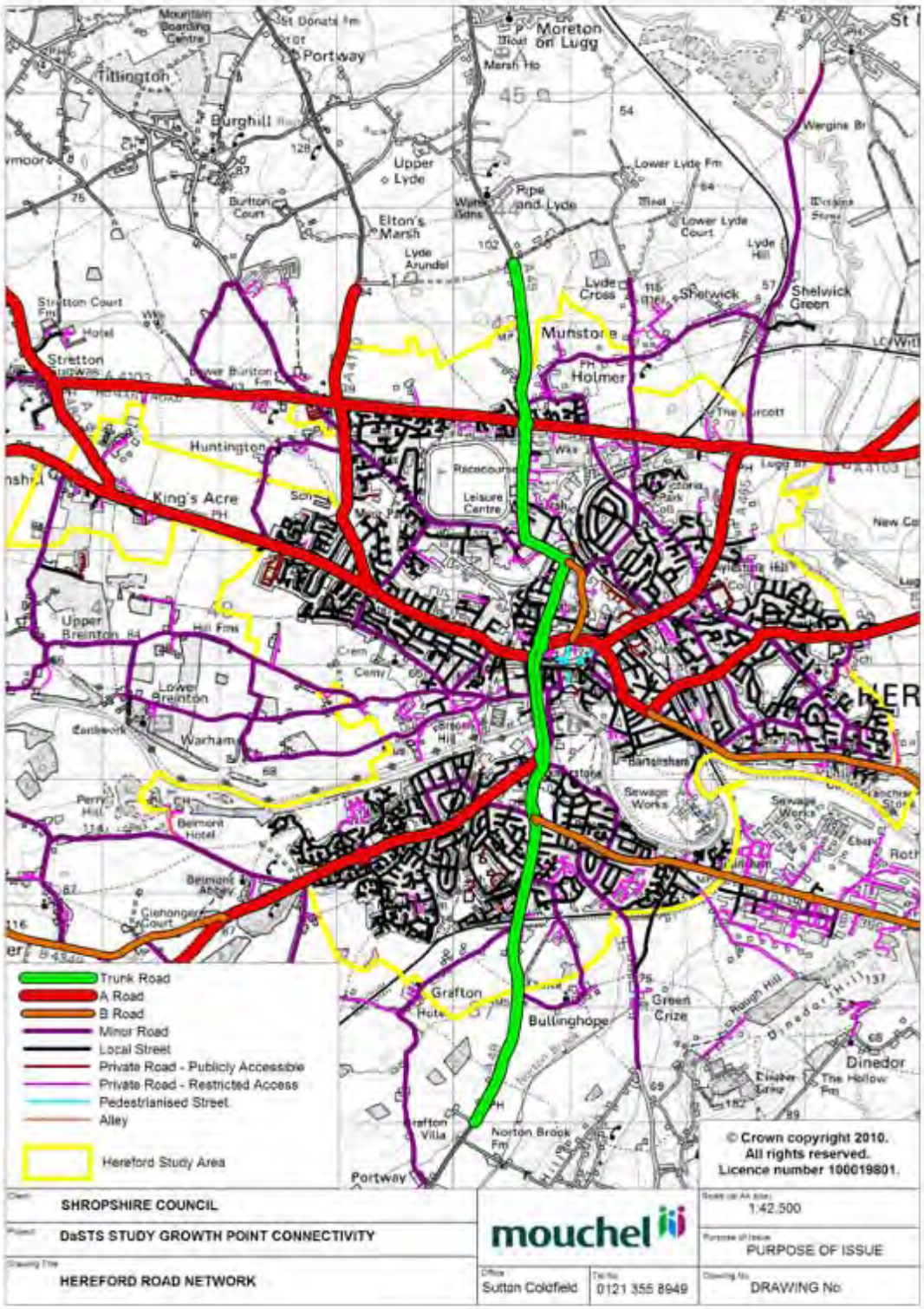

Figure 3-5 Hereford Road Network

Public transport networks

Figure 3-6 shows the local public transport networks in each of the three towns. Rather than show each route separately, the plans are colour coded to indicate the overall frequency of buses on each link of the network. The warmer colours indicate the highest frequencies.

Bus services in **Telford** are focused on the town centre box road, where the main bus station is located. Overall, most parts of the town are fairly well served by public transport. During the first local transport plan period, an extensive programme of quality bus routes were introduced, with higher frequencies, accessible buses, improved waiting facilities and some bus priority measures. Significant growth in patronage was reported in the period 2000 – 2006.

Some more peripheral areas of Telford are not served by the Quality Routes and are not within easy walking distance of key services.

Telford's bus station is accessed from the indoor town centre. Whilst it has fairly basic facilities, it works well and is easily accessed on foot – at least during the hours when the shopping centre is open. There are secondary bus stations at Wellington and Oakengates.

Bus services in **Shrewsbury** are mainly oriented towards the town centre. Most routes are radial and go into the bus station, which is on Smithfield Road, near the railway station. Some services also make a partial circuit of the town centre.

Areas on the north-east, east and south side of the town, including Bayston Hill, are generally well served by frequent bus services. The western side of the town has significantly fewer services. Bus services do not generally make use of the town's orbital roads, although these are the backbone of many car journeys.

Shrewsbury has a popular Park and Ride service, operating from three purpose built sites in the north, south and west of the town. Services operate on a ten minute frequency and all buses perform a full circuit of the town centre. All services go to the railway station.

Bus lanes have been provided, and recently improved, on Castle Street and St. Mary's Street. There are few other opportunities for bus priority on Shrewsbury's narrow streets.

The main access to the bus station is from an indoor shopping centre. The overall ambience of the bus station does not compare favourably with that of the shopping centre, and it has limited facilities for passengers.

A real-time passenger information system has been installed on local bus services, but this is presently not in use due to the cost of maintenance.

The compact urban form of **Hereford** supports a fairly frequent and comprehensive bus network, with many routes having a 15 minute frequency. There is good bus access to most of the residential areas which surround the town centre.

There are presently two bus stations in Hereford – one for city services and one for buses from outside the city.

There are few, if any, opportunities for bus priority in Hereford and buses experience the same congestion and delay as all other traffic.

There is no Park and Ride service for Hereford at present, but there are aspirations to build a 750 space site and service from the north of the city.

To summarise, all three settlements have reasonable bus networks. In the recent past both Telford and Shrewsbury have invested in major improvements, albeit following very different strategies. Telford developed high frequency Quality Bus Routes on corridors with potential for increased bus use. Shrewsbury developed a comprehensive Park and Ride service, a passenger information system and shelter improvements. In all three settlements, there have been some reductions in service due to financial pressures.

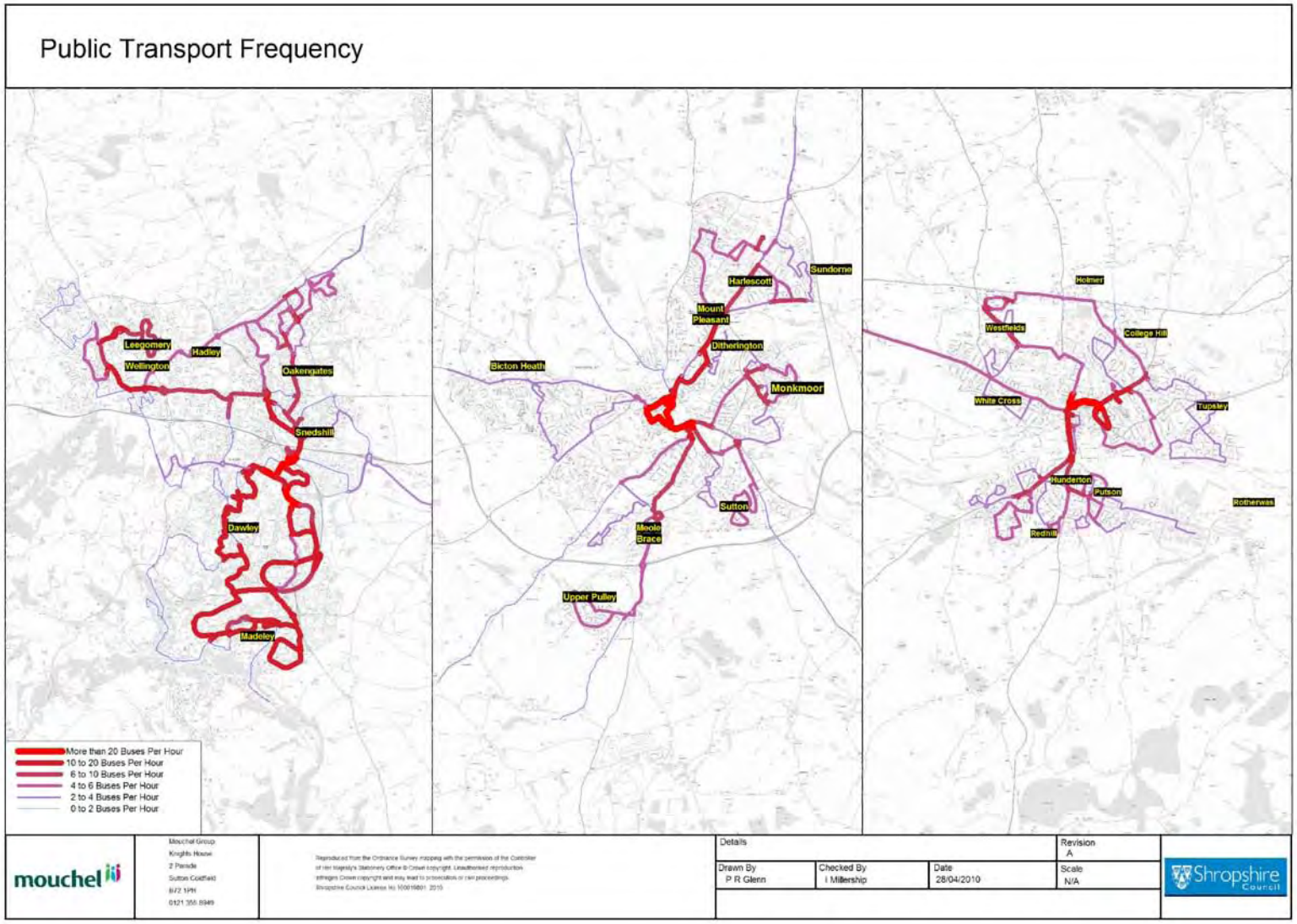

Figure 3-6 DaSTS settlements Bus Network by Frequency

Cycle networks

Figure 3-7 shows the defined cycle networks in each of the three settlements. Although the available cycle maps for each place (from which these have been drawn) differ slightly in the definitions used, they do give a general picture of the overall level of provision for cyclists.

Telford has an extensive cycle network. National Cycle Network Routes 45, 55 and 81 run through the town, with Route 55 Silkin Way in particular forming a strong north-south spine providing access to Telford Town Centre and intersects with the other dedicates routes. This is supplemented by a network of on and off carriageway routes shared between walkers and cyclists and linking most areas of the town.

Shrewsbury's cycle network comprises a number of dedicated cycle tracks, including routes alongside the main distributor roads, supplemented by a number of signed advisory routes on quieter, mainly residential roads. Within the town centre, there is a riverside cycle route but very little other cycle provision due to the narrow streets, one way system and general hilliness. Apart from this, it is possible to make quite long trips within Shrewsbury on connected cycle routes. Further development of Shrewsbury's cycle network is proposed as part of the cycle towns initiative.

Hereford has a number of dedicated, traffic free cycle routes, most notably the Great Western Way which provides a very strong north-south spine from which run a number of other dedicated or advisory routes. There are some gaps, and there are plans to fill these. Connect 2 will add a second cycle river crossing near Rotherwas in around 2013

All three of the settlements have benefited from recent investment in cycle provision and as a result have a balance of dedicated and advisory routes which broadly reflect and supplement the main highway routes. Hereford, being the smallest settlement and fairly level is probably the easiest for cycling. In Shrewsbury, the physical and roadspace constraints within the river loop and on some radial routes are a challenge to future enhancement. Telford has a very extensive network, but the distances to be covered (and the relative ease of car travel) may reduce the attractiveness of cycling.

In all places, even where dedicated routes are provided, cyclists often have to share road space at junctions with other road users. Advance stop lines at traffic signals and cycle/pedestrian crossing places at roundabouts have been used in an attempt to address this common problem.

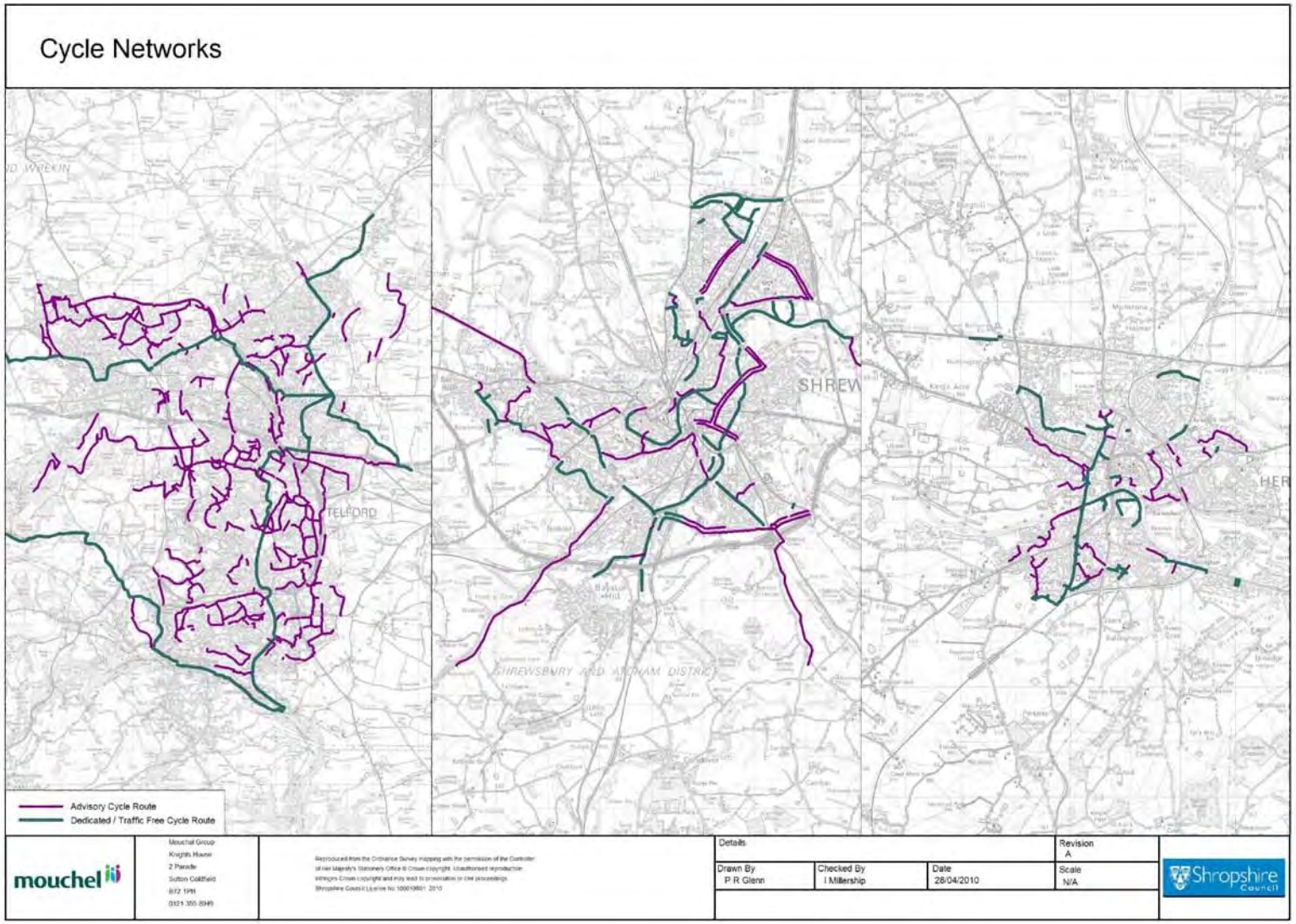

Figure 3-7 DaSTS Settlements Cycle Network

Taxis

Telford currently has some 34 hackney carriages, all of which are London style, accessible vehicles as a result of a mandatory[16] policy. The hackneys serve ranks at Telford Central Rail Station, and several other locations.

The hackney carriages are supplemented by some 400 private hire vehicles.

The number of hackney carriage vehicles fell during the 1990's from a high of 53 to the current level. Although there is no definite reason for this, the tight mandatory policy and the cost of such vehicles might be a factor.

A maxitaxi scheme was organised successfully during the early 2000's serving those needing to get to work early. However, with the ending of revenue funding for this service, it has fallen into disuse, having achieved only limited patronage.

Taxi fares in Telford are the 356th highest in the UK, making Telford one of the authorities with the lowest fares. Usage is believed to be relatively high.

Shrewsbury: When Shropshire became unitary, Shrewsbury remained a taxi zone within the wider Shropshire Licensing area. Shrewsbury currently has a 100% wheel-chair accessible fleet, but allows a wider range of vehicles than the strict London criteria. In fact the entire fleet of 40 is made up of these converted body style vehicles. There are currently around 300 private hire vehicles.

The principal rank for Shrewsbury hackney carriages is at the station where Arriva Trains Wales issue permits for 28. There have been problems attracting hackney carriages to use this in sufficient numbers, and it is understood that the permit cost is to be reduced. Other ranks exist in the Bus station (little used) and two night only ranks, one of which is not used since the night club has closed. The Claremont Bank rank is, however, well-used at night, and needs further spaces.

Taxi fares in Shrewsbury are the 279th highest in the UK.

Hereford: Herefordshire adopted a single licensing area policy when it became a unitary authority some years ago. This means that the numbers reported are the fleet for the full Herefordshire, not just the City area. There are currently 201 hackney carriage vehicles, of which just 16 are London style wheel-chair accessible. There are no converted body type vehicles in the hackney carriage fleet. There are 249 drivers for these vehicles. Herefordshire has just 149 private hire vehicles.

There are three main ranks in Hereford City, all operating during the daytime. These are located at the Railway Station, at the Cathedral and at Tesco within the Town Bus Station.

[16] Some authorities have a 'mandatory policy' which requires all hackney carriage vehicles to be wheel-chair accessible. Hackney carriage vehicles can also have a limit placed on the number of vehicles licensed, "if and only if there is no significant unmet demand for the services of hackney carriage vehicles". There are no such limits in the study areas.

Taxi fares in Hereford are the 78th highest in the UK, quite high compared to the other two areas.

Rail facilities and services

Telford has three stations, Telford Central, Wellington and Oakengates, on the line between Wolverhampton and Shrewsbury. A Railfreight Distribution terminal is located just east of Wellington station (Telford International Railfreight Terminal (Donnington) on a separate spur), and the Ironbridge Power Station Coal facility is served by a separate branch. All three stations in Telford are operated by London Midland.

Telford Central and Wellington are served by Arriva Trains Wales and London Midland, with direct London services provided by open access operator Wrexham and Shropshire. Oakengates is served by London Midland only.

Telford Central station lies just north of Telford Town Centre. Connection to the centre is by means of a large footbridge, with walking time to the town centre of 10-15 minutes along a fairly well-marked but exposed route. Bus or taxi services are readily available and can also be used to link to the Town Centre. Both Wellington and Oakengates stations are close to their respective town centres. Telford Central has a charged for car park with a reasonable number of spaces. Wellington has free car parking and excellent links to its bus station.

Shrewsbury lies at the junction of two major rail routes – Birmingham to Machynlleth and Aberystwyth / Pwllheli and Crewe to Hereford and Newport. There is a further route from Shrewsbury to Chester via Wrexham. Shrewsbury station is operated by Arriva Trains Wales. Shrewsbury is served by Arriva Trains Wales and London Midland, with direct London services provided by Wrexham and Shropshire.

Shrewsbury station is adjacent to the main central shopping area and has a taxi rank and a bus stop, although the main bus station is a moderate walk away. Shrewsbury has a pay and display car park with a reasonable number of spaces, but located some distance from the station.

Hereford lies on the Crewe to Shrewsbury and Newport route, and is the junction with the route to Worcester and Birmingham. Hereford station is operated by Arriva Trains Wales. Services at Hereford are similarly operated by both Arriva Trains Wales and London Midland, with London services provided by First Great Western.

Hereford station has both taxi rank and bus stops, and a well-marked walking route, although the time to the main shopping area is between 5-10 minutes.

None of the settlements has any significant local commuting by rail. Rail is mainly used for medium or long distance journeys, to larger centres, principally Birmingham.

In November 2009, DfT published the document “Better Rail Stations” which categorises all stations according to the level of activity. Category C1, representing city or busy junction stations, is the highest represented in the settlements (Shrewsbury and Hereford), whilst Telford is identified as C2, a busy railhead. Wellington is a category E, small staffed station,

whilst F2 (Oakengates) is the lowest category, representing stations with fewer than 100,000 trips per annum.

3.3 Existing travel behaviour

Mode choice and distribution of work trips

The National Census provides a valuable source of information on people's travel patterns. Information is available at ward level, for the full range of travel modes, on a consistent basis for the three settlements. We have used this to help build up a picture of travel choice in the study settlements.

Two disadvantages of using census data must however be acknowledged. Firstly, the data is from 2001 and is therefore nearly nine years old. Secondly, data is only available for journeys to and from work. Other journey types are not represented. On balance however, we believe that the advantages of using this data outweigh the drawbacks, particularly as work journeys make up a significant share of travel in peak periods.

Figure 3.8 shows the percentage of journeys to work by each mode in each of the settlements.

In all three places, most people drive to work. There are however very marked differences between the study settlements. 64% of people living in Telford drive themselves to work, compared with 58% in Shrewsbury and only 54% in Hereford.

Looking at it the other way around highlights these differences even more clearly. 32% of people living in Hereford either travel to work by low carbon modes (walking and cycling) or work from home. The equivalent number is 28% in Shrewsbury and just 18% in Telford.

The percentage of people travelling to work by bus or train is the same in all three places (6%).

It is hard to avoid the initial conclusion that Telford, with its low density, polycentric layout and modern, high capacity road system has become significantly more dependent on car travel than the other more traditional settlements and, as a result, is inherently less sustainable in transport terms.

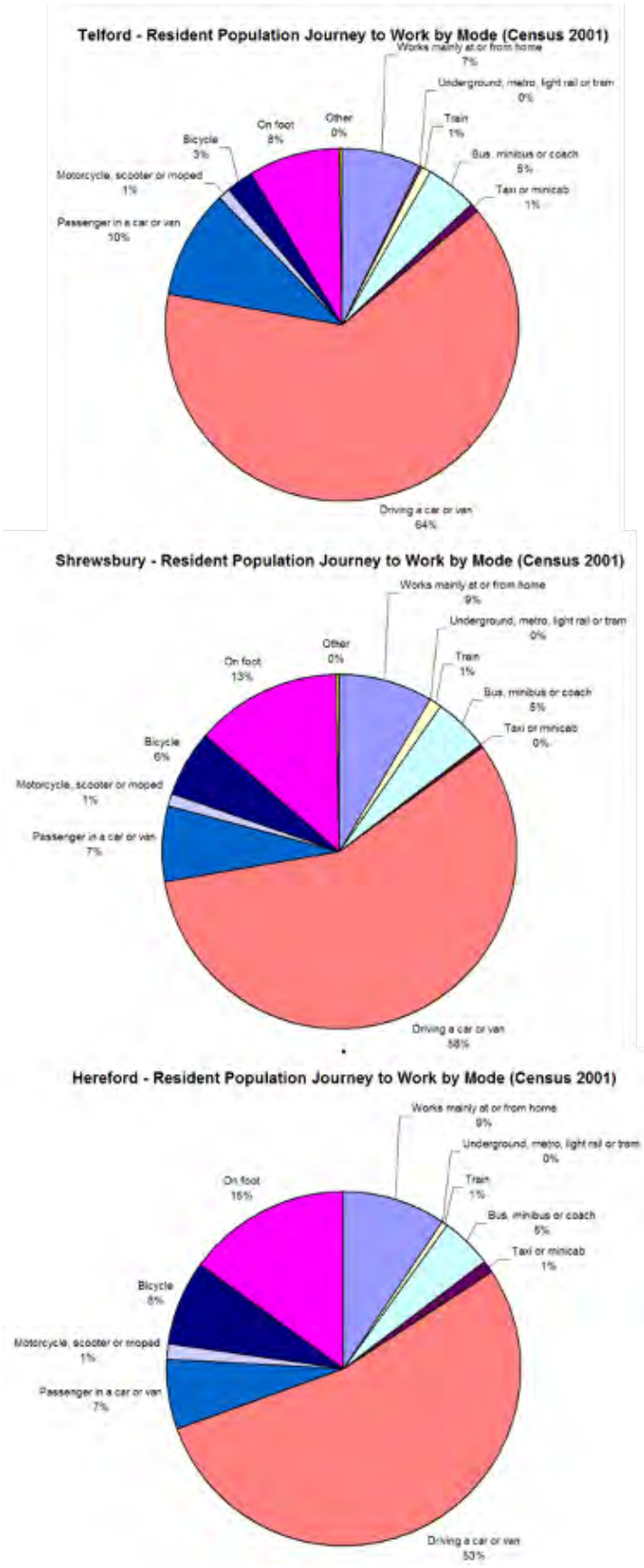

Figure 3-8 Telford, Shrewsbury and Hereford: Journey to Work by mode

The differences between Shrewsbury and Hereford, though smaller, are also interesting. As has been noted, Shrewsbury's traditional radial road pattern has, over time, been overlaid with a good number of new, high capacity roads, including a partial bypass. However it is Hereford, the smallest of the three places and with a less developed road system, which has the lowest rates of car ownership and car use.

There does not appear to be a correlation between income and the proportion of people travelling to work by car. The wages of people living in Hereford are similar to those of people living in Telford. This suggests that in Telford, car ownership and use is borne of necessity, not just because people can afford it.

As each of these three settlements gears up to accept significant extra housing growth, there are some clear challenges to be met. Will the people living in the 25,000 new houses in Telford make the same travel choices as people do now – to travel mainly by car? Or are there ways that the new development can be shaped and managed to encourage more sustainable patterns of travel.

There are similar challenges for Shrewsbury and Hereford. With significant new development planned in both towns, can we be confident that the people living in the new houses will exhibit the same travel behaviours as people do now? Or, as new development takes place supported by new road infrastructure, could travel behaviour in these new developments become more like that seen in Telford, with higher car dependence?

Looking at this issue in more detail, Figures 3-9 to 3-13 show the percentage of journeys to work by each mode in each of the settlements. The "hotter" colours represent the highest percentages. This makes it very easy to see differences in behaviour between, and within, the three settlements.

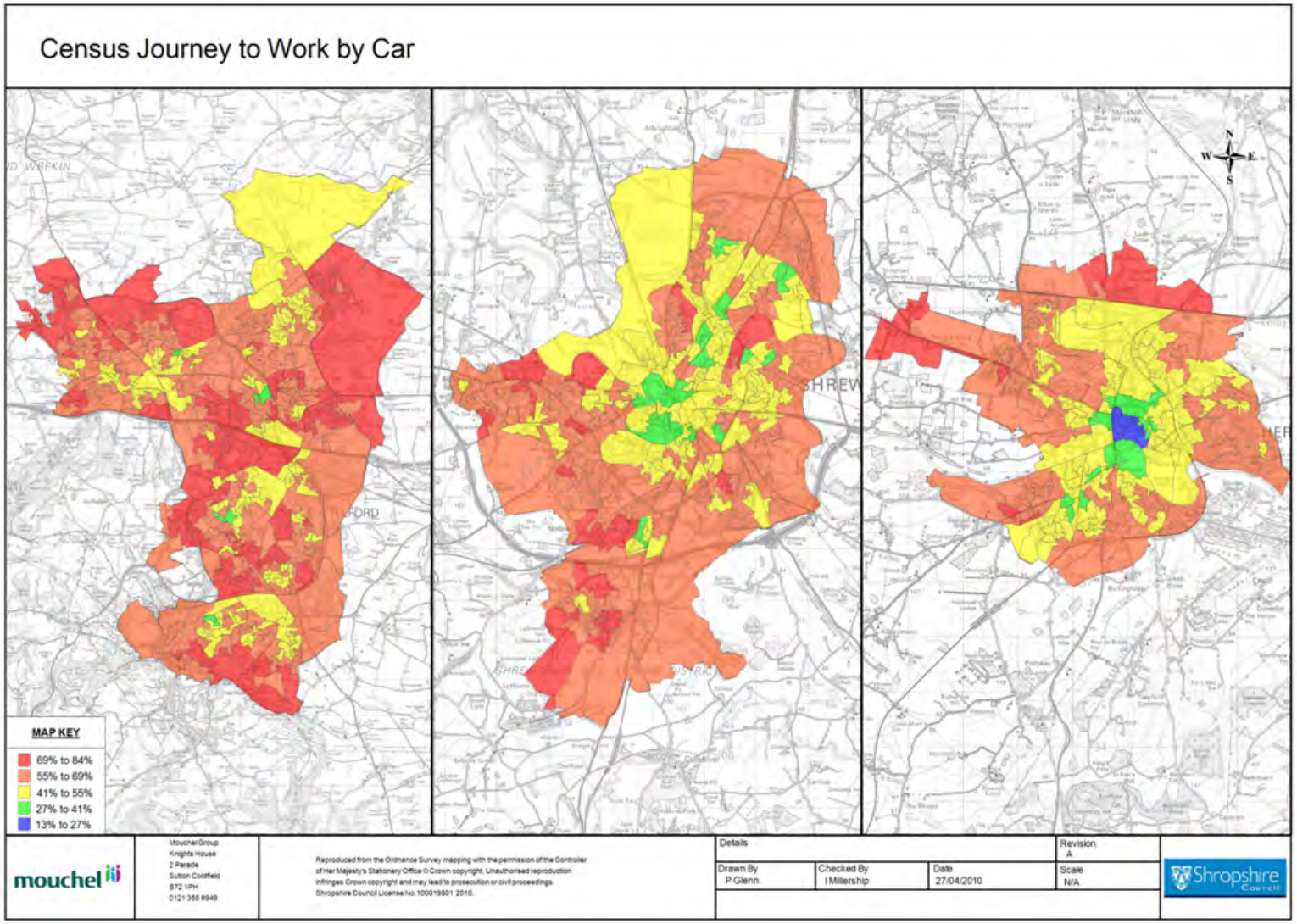

Figure 3-9 DaSTS Settlements Journeys to Work by Car

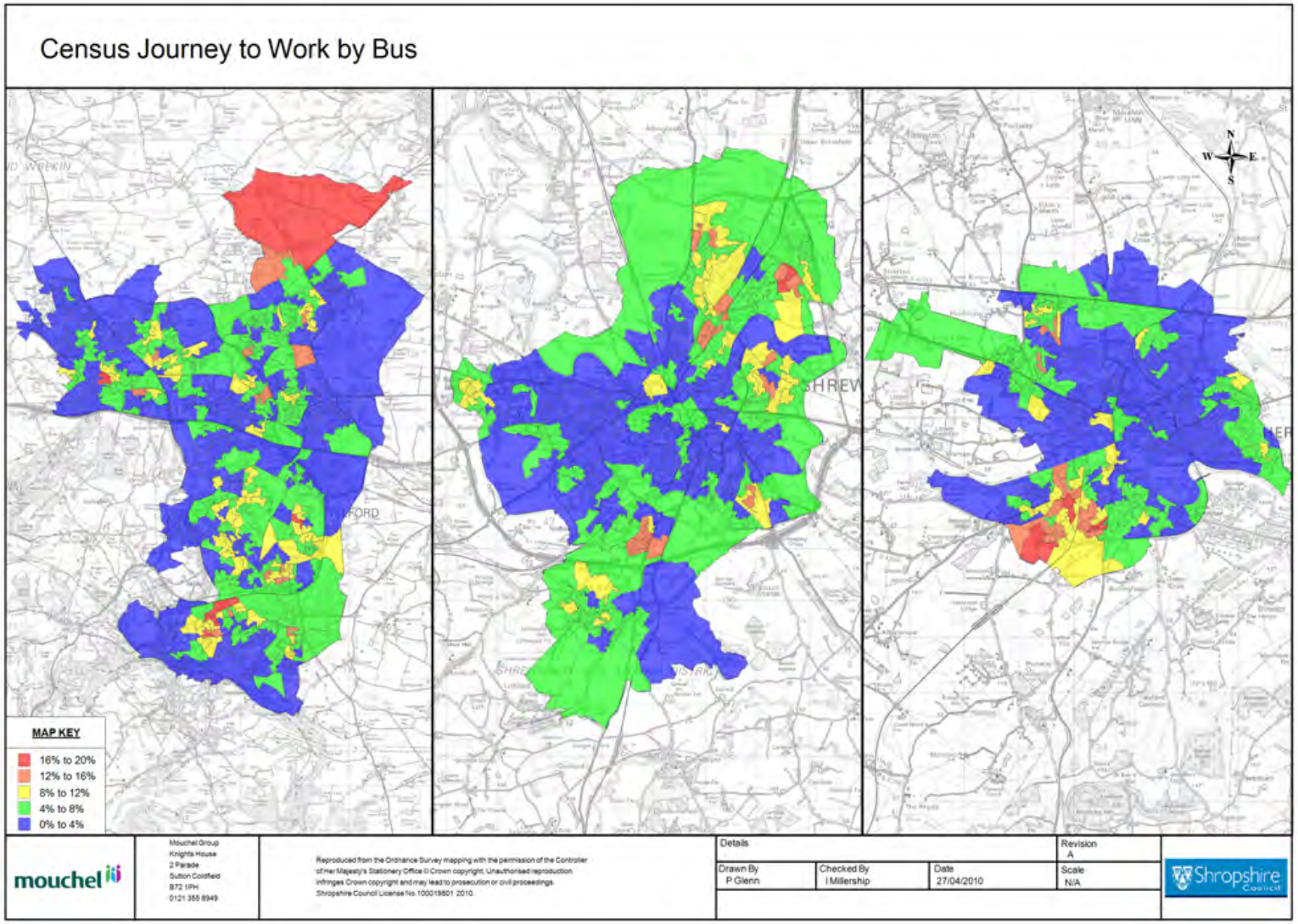

Figure 3-10 DaSTS Settlements Journeys to Work by Bus

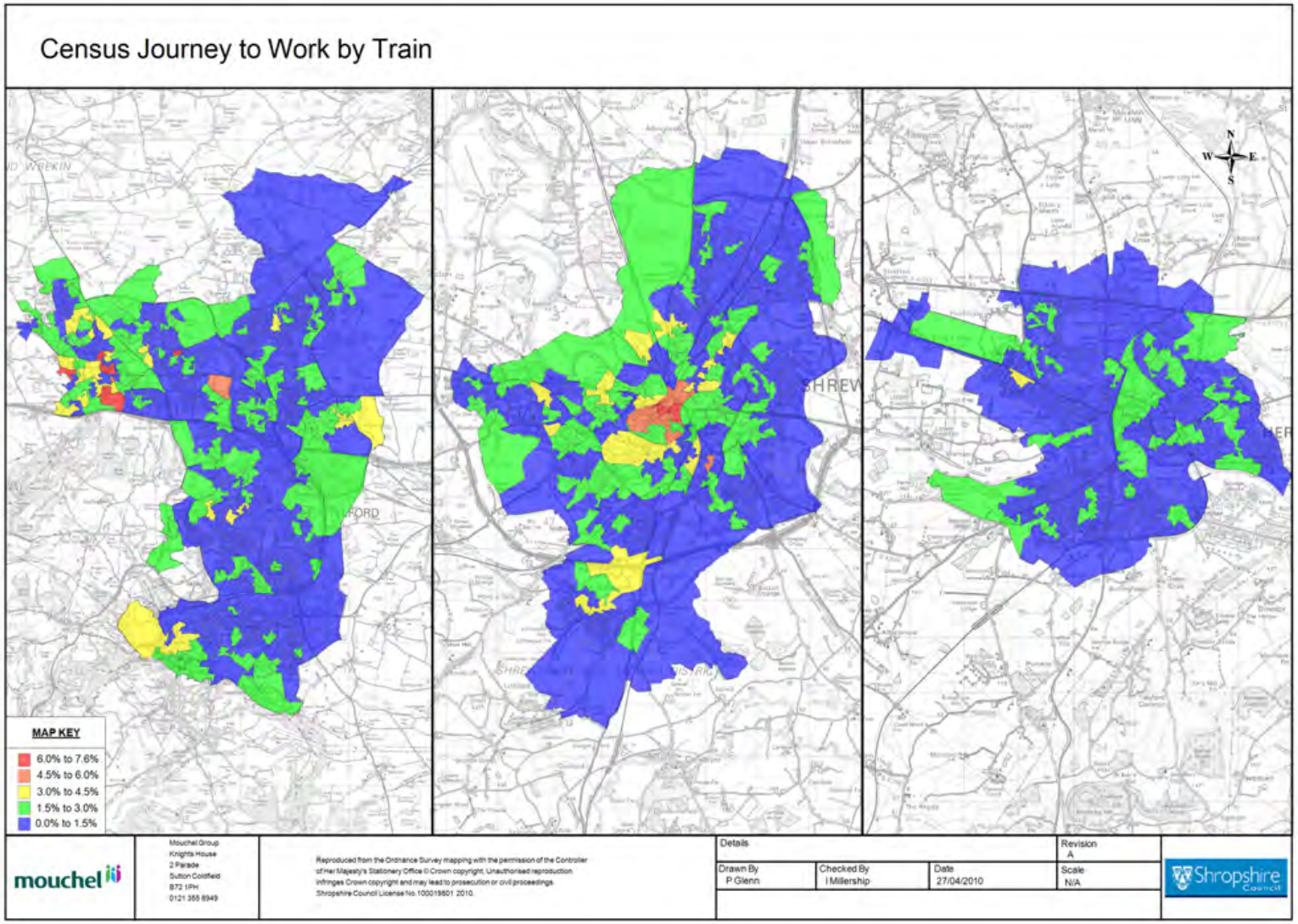

Figure 3-11 DaSTS Settlements Journeys to Work by Train

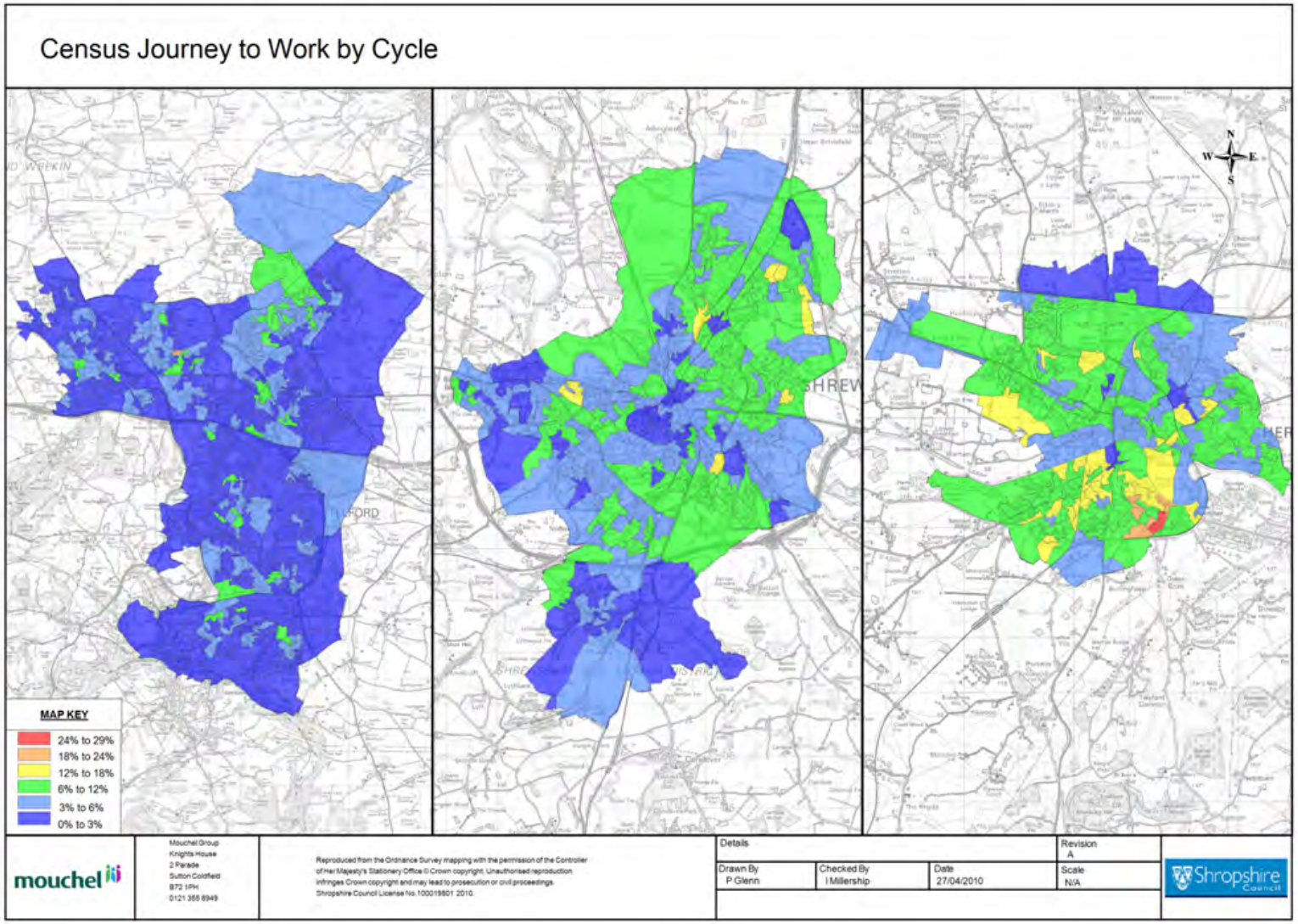

Figure 3-12 DaSTS Settlements Journeys to Work by Cycle

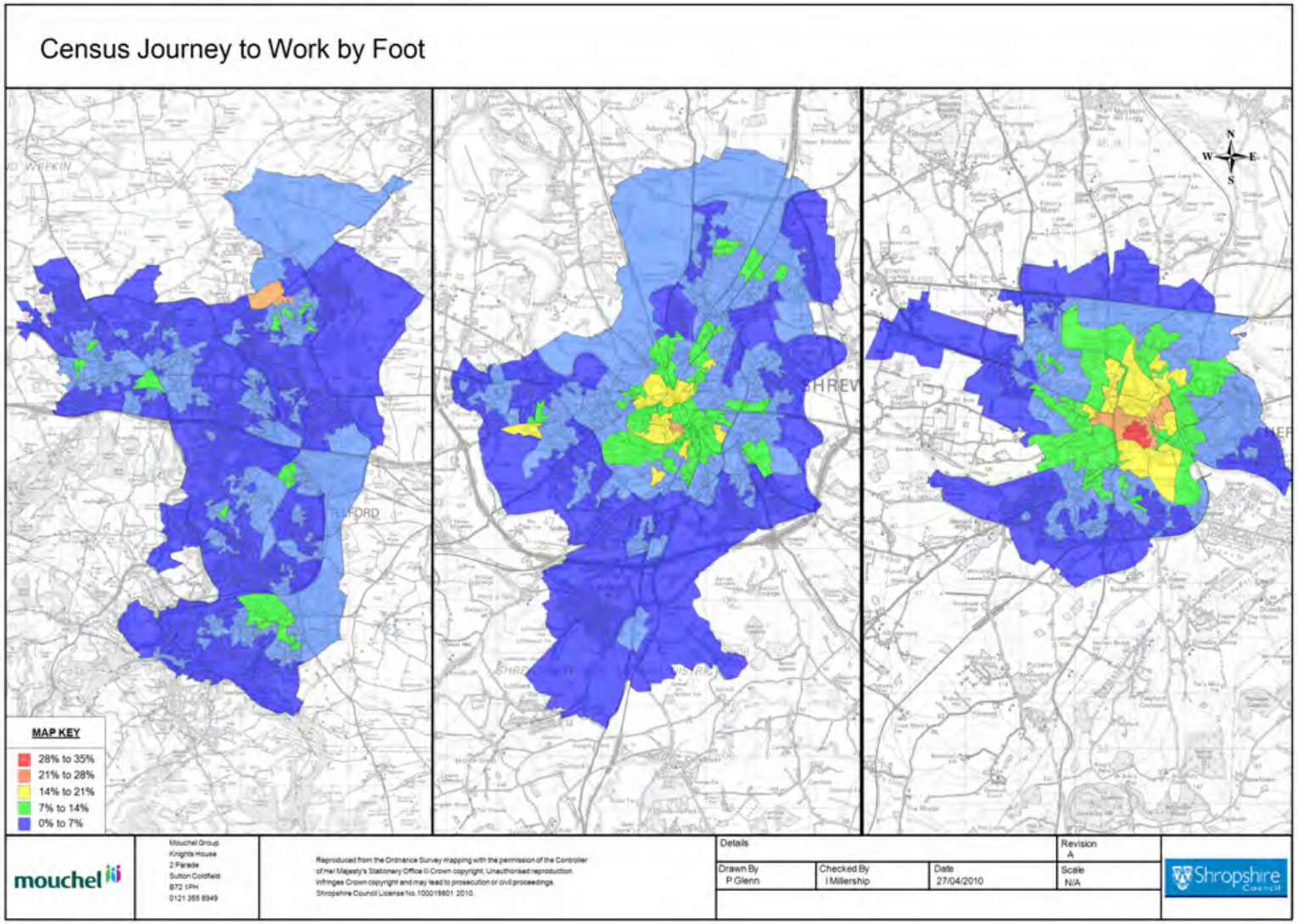

Figure 3-13 DaSTS Settlements Journeys to Work on Foot

Journeys to work by car

Figure 3-9 shows the percentage of all work journeys made by car drivers from each ward in each of the three towns. The diagram for Hereford (Figure 3-15) is easiest to interpret as it shows a distinct concentric pattern. People living in the city centre are least dependent on car travel, whereas those living furthest away from the centre are increasingly car dependent. A similar pattern can be seen in Shrewsbury, although there is a much bigger area, especially in the south of the town and in the suburb of Bayston Hill, where car is the dominant mode.

In Shrewsbury almost all of the private housing areas developed in the later part of the 20th century – including some newer developments "embedded" into older areas, show car as the dominant mode for travel to work, whereas this is not generally the case for older housing areas.

In Telford, car is the dominant mode of travel to work for almost all areas, though this is less pronounced near to the local centres of Wellington, Dawley, Madeley and Donnington.

Taken together these observations suggest, perhaps unsurprisingly, that people living in newer developments are more likely to travel to work by car than people in more established areas. In many cases this may be because they are simply located further from people's workplaces, but we also need to consider whether the actual design of new developments, their accessibility by other modes or the availability of local facilities could also contribute to their relative car dependency.

Journeys to work by bus

Figure 3-10 shows the percentage of all work journeys made by bus from each ward in each of the three towns.

In Shrewsbury, the highest levels of bus use are from the residential areas to the north and east of the town, from the Gains Park development in the west, and the Meole Estate and from Bayston Hill in the south. These areas, which are reasonably well served by bus, tend to be those with less expensive housing.

Bus users in Hereford tend to be concentrated in the southern part of the city, in areas which are well served by bus routes. As with Shrewsbury, these are areas with less expensive, or rented, housing.

None of these results is surprising, but it is sometimes worth stating the obvious. In provincial towns and cities – unlike larger cities – it is unusual for professional people to use public transport for work, except as a last resort. We need a better understanding of the barriers which may deter bus use in medium size towns and cities.

In Telford, overall bus use is about the same as in Shrewsbury or Hereford, but the areas where bus is used are distributed in a broad arc from the north west to the south of the town which links key employment and residential areas. These areas are generally well served by bus routes, several of which were being improved and actively promoted at around the time the census was taken.

Journeys to work by train

Figure 3-11 shows the percentage of all work journeys made by train from each ward in each of the three towns. Whilst train travel overall only represents about 1% of work trips, it is interesting to note the concentration of rail users amongst people living in the very centre of Shrewsbury from where up to 6% of residents commute out by train. This pattern is less evident in Hereford, but can be seen in Telford where there is a cluster of rail users around Wellington station, but not Telford Central station. This suggests that, for some people at least, the ability to walk to a railway station is a factor in the choice of where to live, or where to work.

Journeys to work by bike

Figure 3-12 shows the percentage of all work journeys made by cycle from each ward in each of the three towns. Hereford, with the highest overall level of cycling (8%) shows that cycling to work occurs from a large part of the city, with a particularly high proportion from the area served by Holme Lacy Road, close to the large Rotherwas employment area. There is more cycling generally from the southern parts of the city, particularly the areas served by the Great Western Way cycle route. Hereford is fairly level and in this respect easy for cyclists.

By contrast, very few people appear to cycle to work in Telford, even though there are a large number of dedicated cycle routes. The pattern of cycling to work in Shrewsbury is similar to that for bus use, suggesting that it may be in part due to people not having a car available for work journeys. Cycling is also more common where there are employment areas fairly close to where people live. Few people cycle from Bayston Hill, which is primarily a dormitory suburb, separated from the rest of the town by the A5 trunk road.

Journeys to work on foot

Figure 3-13 shows the percentage of all work journeys made on foot from each ward in each of the three towns. In both Hereford and Shrewsbury people living in or near the town or city centre are most likely to walk to work. In Hereford, walking to work is fairly common over quite a wide area. In Shrewsbury there are clusters of walking which appear to be related to the traditional employment areas to the north of the town, the Shirehall in the east and the main hospitals to the west.

In Telford, though overall walking levels are much lower, there are clusters of walking to work related to the MOD Donnington industrial area, Madeley and the Halesfield industrial area, Wellington and, to a lesser extent, Telford town centre.

Shrewsbury and Hereford are fortunate, insofar as their natural and built form includes attractive walking routes, via pedestrian river bridges, parkland, historic streets, alleyways and landmark buildings which provide interest and a sense of place, reinforced by selective improvements.

A challenge for Shrewsbury and Hereford is to understand, protect and enhance those characteristics of place which make it easy and attractive for people to walk.

In Telford, there are extensive off-road walking routes, but few traditional streets to walk along. The distributor roads are far less conducive to walking, even where they include pedestrian facilities.

A challenge for Telford is to use new development and increased density as an opportunity to create variety, interest and orientation for journeys on foot.

New developments, such as supermarkets, retail units and workplaces are often designed and built with car access in mind. Pedestrian access, where provided, can often be “coarse grained” and involve negotiating a sea of car parks and access roads. We rarely build new streets with active frontages and high quality pedestrian facilities. Over time, large parts of traditional towns can become places which are less easy to navigate on foot, less friendly – sometimes even quite hostile - to people on foot. Even in new housing areas, safety and security considerations dictate that estate roads are winding and indirect, with limited access to main roads and few alleys or short cuts – whereas people on foot need direct, straight routes and clear lines of sight to the next corner, landmark building or feature. Use of lighting, surface materials, trees and street furniture all have a role to play.

A challenge for all three settlements, as they face substantial growth, is to pay unprecedented attention to the built form and function of new development, to avoid the pressures of developers for car-dominated schemes and deliberately to build in those details which really work for people on foot.

Often people drive because they cannot get the things they need locally. New estates rarely include a corner shop, yet these can still thrive in more traditional areas. The more fine grained an area is, the more likely people are to be able to walk or cycle. The absolute separation of workplaces and homes, is a product of a car-based society, and makes it less likely that people will walk to work.

Working from home

A significant proportion of people in all three settlements worked from home according to the 2001 census, and this may well have increased further by now. We have found no evidence of a spatial pattern to home working, which is what one would expect.

Distance travelled to work

The average distance travelled to work in each place has been estimated from the census data:

Table 3-3 Mean distance travelled to work

	Telford	Shrewsbury	Hereford
Mean distance to work (all modes)	9.3 km	9.9 km	8.1 km

Overall, people living in Shrewsbury travel further to work than people living in Telford, whilst those living in Hereford have the shortest journeys.

Looking at this in more detail reveals other differences between the three places:

Table 3-4 Distance travelled to work as % of all work journeys

Distance to work	Telford %	Shrewsbury %	Hereford %
Work at home	8	9	10
0 – 2 km	21	30	35
2 – 5 km	30	27	30
5 – 10 km	21	8	7
10 – 20 km	6	9	7
20 – 30 km	6	8	4
30 – 40 km	3	1	2
40 – 60 km	3	3	2
> 60 km	3	4	4

People living in Shrewsbury are much more likely to make long journeys (over 10 km) to work than people in either Telford or Hereford. This may reflect the additional distance between Shrewsbury and jobs in the West Midlands conurbation or beyond as well as the tendency of people to live in Shrewsbury and commute to jobs in Telford.

A detailed examination of journey distances from individual wards in Shrewsbury showed that people living in more affluent areas, particularly the town centre, tended to make the longest journeys. There are some indications that journey distances from recent developments may be longer than those from more established areas.

People living in Telford are much more likely to travel between 5 and 10 km to work than people in either of the other settlements. This probably reflects the dispersed nature of the town, and the longer distances people need to travel internally between homes and workplaces.

People living in Hereford are much more likely to work within 2 km of their home than people in the other settlements, reflecting the compactness of the city, and this helps explain the high levels of walking and cycling. 75% of people in Hereford live within 5 km of their work.

This evidence suggests that both Telford and Hereford are more self-contained than Shrewsbury, but that travel distances within Telford are longer because of its size and layout.

Distance travelled – implications for growth

It is reasonable to assume that people travelling to work from new housing developments would, all else being equal, make journeys at least as long as the average for the settlement. However it seems possible that journey distances from newer developments could be higher than the average, if as a result the settlement becomes less compact with homes built further away employment areas.

This is examined further in the following section

Commuting

The extent to which each town is self contained may be understood by looking at the patterns of commuting into and out of each place, as set out in Table 3-5.

Each of the settlements has a net inflow of people to work. This reflects the fact that each place acts as an employment centre for a wider hinterland. Telford and Shrewsbury appear similar in this regard, with significant net inflows. Hereford appears to be more self-contained. However the net figures do not reveal the full extent of in and out commuting.

Table 3-5 Commuting patterns for Telford, Shrewsbury and Hereford

	Telford	Shrewsbury	Hereford
Employed people living in settlement	66,300	36,815	32,284
Total working in settlement	75,847	40,024	37,779
Number who both live and work in the same town/city	52,409 (79%)	26,652 (72%)	24,555 (76%)
Number who travel in to work	23,463 (31%)	13,372 (33%)	13,244 (35%)
Number who travel out for work	13,981 (21%)	10,163 (28%)	7,729 (24%)
Net inflow	9,547 (13%)	3,209 (15%)	5,495 (8%)

People living in Telford are more likely to have jobs within the town than people living in the other two settlements. People living in Shrewsbury are less likely to have a job within the town. On this evidence, Telford is the most self-contained town with only 21% of its working population travelling outside the town for work. Shrewsbury is the least self-contained, with 28% of its working population travelling outside the town for work.

Work origins and destinations

Tables 3-6 and 3-7 show the main places from which, or to which people commute to or from each of the study settlements. To aid comparison, commuting trips in Table 3-5 are shown as a percentage of the number of people working in each settlement; those in Table 3-6 are shown as a percentage of the number of employed people living in each settlement.

Table 3-6 Origins of Daytime working population for Telford, Shrewsbury and Hereford

Origins of people working in:		
Telford	**Shrewsbury**	**Hereford**
Telford 69%	Shrewsbury 67%	Hereford 65%
Rest of Telford & Wrekin 4%	Rest of Shropshire 21%	Rest of Herefordshire 26%
Shrewsbury 5%	Telford 5%	Worcester & Malvern Hills 3%
Bridgnorth 6%		
Rest of Shropshire 4%	Rest of Telford & Wrekin 1%	
Staffordshire 4%	Staffordshire 1%	
Wolverhampton 3%	Wolverhampton 0%	
Birmingham 1%	Birmingham 0%	
Rest of urban WM 2%	Rest of urban WM 0%	Urban WM 0%
Rest of WM 1%	Rest of WM 1%	Rest of WM 1%
Rest of UK 3%	Rest of UK 3%	Rest of UK 4%

Table 3-7 Destinations of Resident working population for Telford, Shrewsbury and Hereford

Work destinations of people living in:		
Telford	**Shrewsbury**	**Hereford**
Telford 79%	Shrewsbury 73%	Hereford 76%
Rest of Telford & Wrekin 1%	Rest of Shropshire 9%	Rest of Herefordshire 12%
Bridgnorth 3%	Telford 10%	Worcester & Malvern Hills 4%
Shrewsbury 3%		
Wolverhampton 3%	Wolverhampton 1%	
Staffordshire 2%		
Birmingham 1%	Birmingham 1%	
Rest of WM urban area 2%	Rest of WM urban area 1%	WM urban area 1%
Rest of WM 1%	Rest of WM 1%	Rest of WM 1%
Rest of UK 3%	Rest of UK 3%	Rest of UK 4%

One in ten employed people living in Shrewsbury commute to Telford for work. The reciprocal flow is much less. Shrewsbury functions as a dormitory town to Telford. There is no similar strong relationship between Hereford and its nearest large neighbour, Worcester.

For all three settlements, most of the in and out commuting is to and from places in their immediate hinterland – Shropshire and Herefordshire in the case of Shrewsbury and Hereford, and Bridgnorth in the case of Telford. However there is significant commuting into Telford from Staffordshire, Wolverhampton and Birmingham.

Surprisingly few people from Shrewsbury or Hereford commute to Birmingham or any other large city for work.

Commuting: Implications for growth

Most people work in the town or city where they live. Those who do not will mostly travel to the nearest larger settlement where there are jobs. Long distance commuting is not a major factor in the study area. It follows that:

- New housing growth is more likely to put pressure on the transport systems within each settlement and its surrounding area than on inter-urban routes.

- Unless new housing growth is accompanied by new employment opportunities in the same settlement, it is likely to lead to increased commuting, especially from Shrewsbury where there is already a significant dependence on jobs in Telford.

- In the case of Shropshire and Telford, if new housing growth is not accompanied by sufficient new employment opportunities in either place, it is could lead to more people travelling into Birmingham and the West Midlands urban area for work, although the numbers doing so at present are very low.

Whilst the remit of this study is to assume balanced housing and employment growth, there is clearly a risk that whilst housing allocations may be taken up, it may be more difficult to attract new employers to the places where jobs are needed. On past performance, Telford is positioned more strongly than either Hereford or Shrewsbury in this respect.

3.4 Use and performance of existing highway networks

Use of the highway network.

Figures 3-28 to 3-30 represent existing volumes of traffic on the highway network in each of the study settlements in the evening peak period. Morning peak figures are set out in Appendix 2. This information is taken from the currently available traffic models for each town as set out below:

Table 3-8 Existing Traffic Model Information

	Telford	Shrewsbury	Hereford
Base year	2007	2006	2008
Period modelled	am and pm peak	am and pm peak	am and pm peak
Assignment of:	pcu	pcu	pcu
Multi Modal	No	Yes	Yes
Highway Base	Visum	Cube	Saturn
Public Transport	Available by August 2010	Cube	Diadem
Model with ?	Thorough discussion held with HA as part of Central Telford Area Action Plan	Included discussion with HA	HA
Status	Approved by DfT as part of Oct 2008 CIF submission	No formal review	Reviewed and approved by modelling advisors
Tempro control?	No – level of growth both RSS and CTAAP is well in excess of Tempro for this area – sensitivity test at Tempro level undertaken as part of CIF bid	Yes	Yes
Other comments	Town Centre (CTAAP) VISSIM model, testing town centre growth with and without mitigation measures including Greyhound link		

	Telford	Shrewsbury	Hereford
Base Year validation?	Strategic Telford VISUM Model LMVR 2007. CTAAP VISUM Model LMVR 2009. VISSIM LMVR 2009	Being done	Yes
Still developing?	Yes, multi modal model being developed and will be available Aug 2010	Yes	Yes
Will a better version be available for Phase 2?	Yes	Yes – including newer Saturn 2009 base highway model	Yes
Possible issues for model at Phase 2	Level of PT validation	Smarter Choices Impact	High level of base year congestion
	Testing of RSS Housing sites	Tempro update impact	
	High level of congestion arising from RSS and CTAAP growth proposals.		
	High level of congestion arising from RSS and CTAAP growth proposals.		

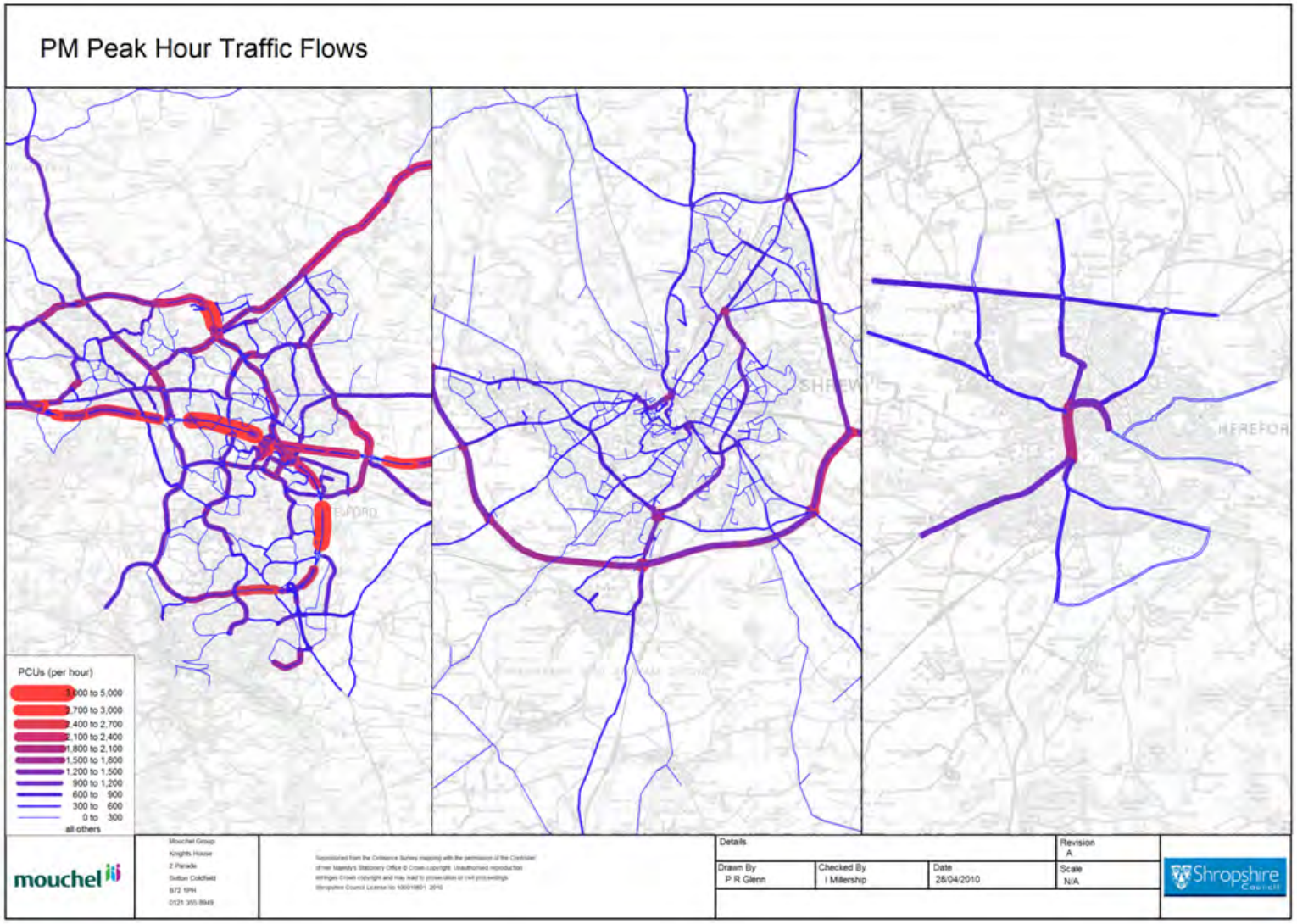

Figure 3-14 DaSTS Settlements PM Peak Hour Traffic Flows

Figure 3-14 represents the existing volumes of traffic using the highway network in each settlement. The same scale and colour scheme has been used for each.

Some differences between the three places are immediately apparent:

Telford's highway network carries very high volumes of traffic into, through and around the town, not only on the M54 but also on the town's principal distributor roads. Traffic volumes are also high on the A519 to Newport in the NE of the town and the A464 to Shifnal in the SE. Most, but not all, of these busy roads are modern and purpose built, but there are also significant flows on "traditional" roads, especially in Wellington and Leegomery in the NW of Telford where the A442 distributor road does not continue eastwards to join the M54.

Shrewsbury's highway network is less busy. The recently constructed A5 and A49 bypasses carry significant volumes of traffic on the south and east sides of the town. Apart from the bypasses, the role of the distributor ring road can be seen, carrying traffic in a broad arc from the west to the north of the town, the busiest sections being the purpose built Telford Way which crosses the Severn to the north of the town. In the north-west sector, the lack of an outer river crossing is evident in the volume of traffic in Frankwell, Welsh Bridge, Smithfield Road and the Chester Street gyratory near the railway station. These roads carry similar levels of traffic to the A49 eastern bypass. There is also a concentration of traffic at the English Bridge.

In **Hereford**, traffic flows in most parts of the city are, typically, similar to those in Shrewsbury – if anything a little lower. The one obvious difference is the volume of traffic which uses the dual carriageway river bridge, where the A49 trunk road crosses the Wye near the centre of the city. There are also significant traffic flows on the A438, also a dual carriageway and, to a lesser extent, on the other main roads converging on the bridge. The concentration of traffic on the bridge illustrates the rather obvious point that this single connection between the northern and southern parts of the city is important for local traffic as well as through traffic on the A49.

Performance of the highway network.

In order to obtain a snapshot of the performance of the roads in each settlement, we have also analysed data available from the Trafficmaster system for 2008/2009.

Figure 3-15 shows journey speeds on each part of the network in each settlement. These are observed, not modelled, values. The same scale and colour coding has been used for each settlement. (It is worth taking time to become familiar with these, in order to see what these diagrams show.)

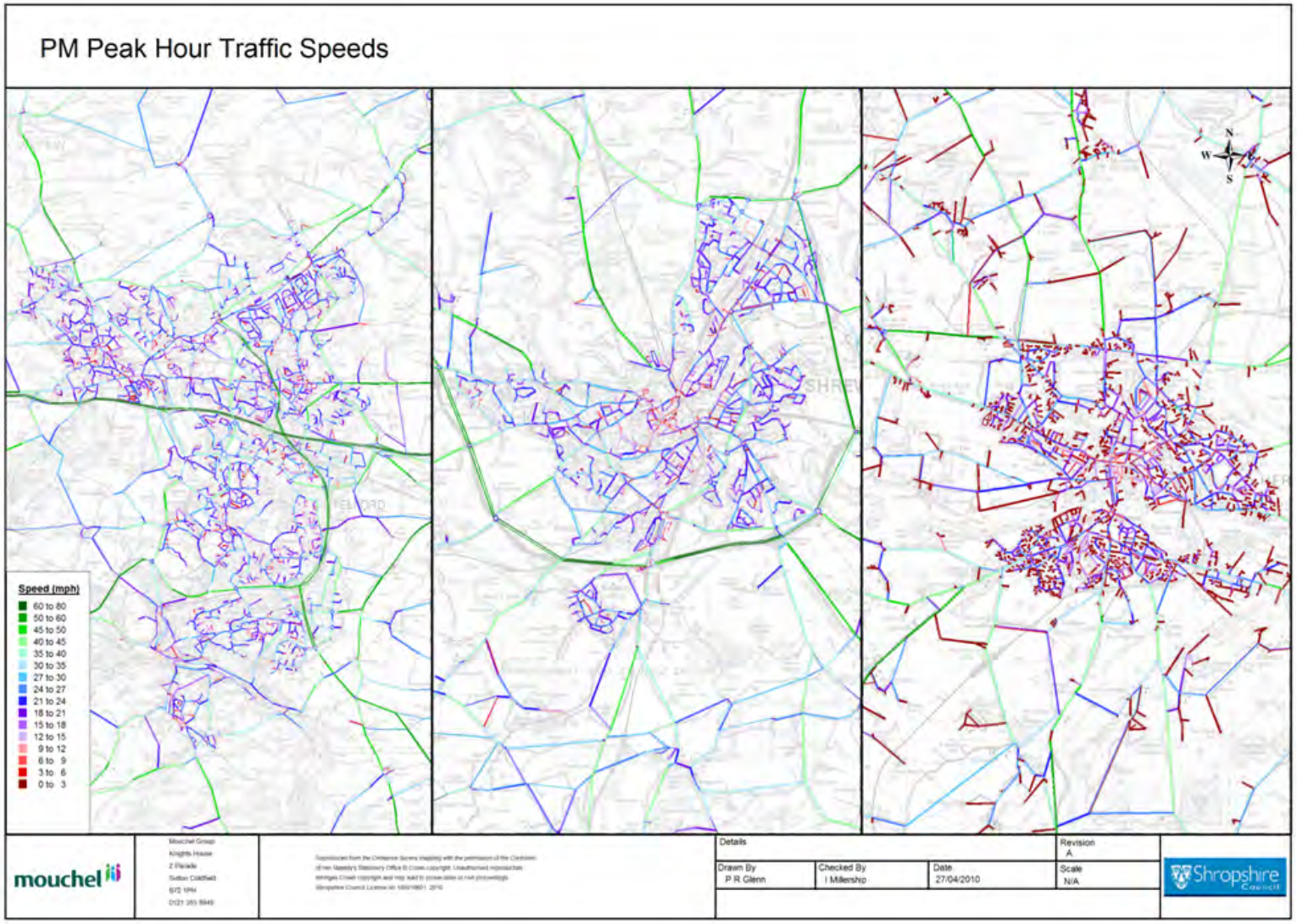

Figure 3-15 Telford PM Peak Average Speeds

In **Telford**, the main traffic arteries (identified in the traffic volume plots previously discussed) also appear to be free flowing in the peak periods. Speeds are lower on main roads in the Wellington area where, as previously observed, these are generally not purpose built. Speeds away from the main distributors are lower; in most cases this reflects the speed limits.

In **Shrewsbury**, the bypasses are generally free flowing, but with some evidence of reduced speeds on the approaches to the A5/A458 junction in the SE. Within the town, there is evidence of slow moving peak hour traffic on parts of the distributor ring, and on all of the radial roads approaches to the river loop. Within the historic centre speeds are low, as would be expected in a 20 mph zone; this is unlikely to indicate a problem.

Hereford exhibits a very similar distribution of speeds in the city centre, but does not have the more free flowing distributor roads and bypass further out from the centre.

Congestion

Although, in a study of this sort, it is not practical to measure congestion exactly, a useful proxy for the level of congestion in each settlement is to consider the percentage of “free flow” (i.e. off peak) speed which is achieved on each link of the network during the peak hours using the Trafficmaster dataset. These are observed, not modelled values. Figure 3.16 shows this measure for each of the three settlements. As before, the same scale and colour scheme is used for each settlement, and the hotter colours represent the greatest levels of peak hour congestion. The aim is to give a broad brush representation of the whole area, not a detailed measurement on each link.

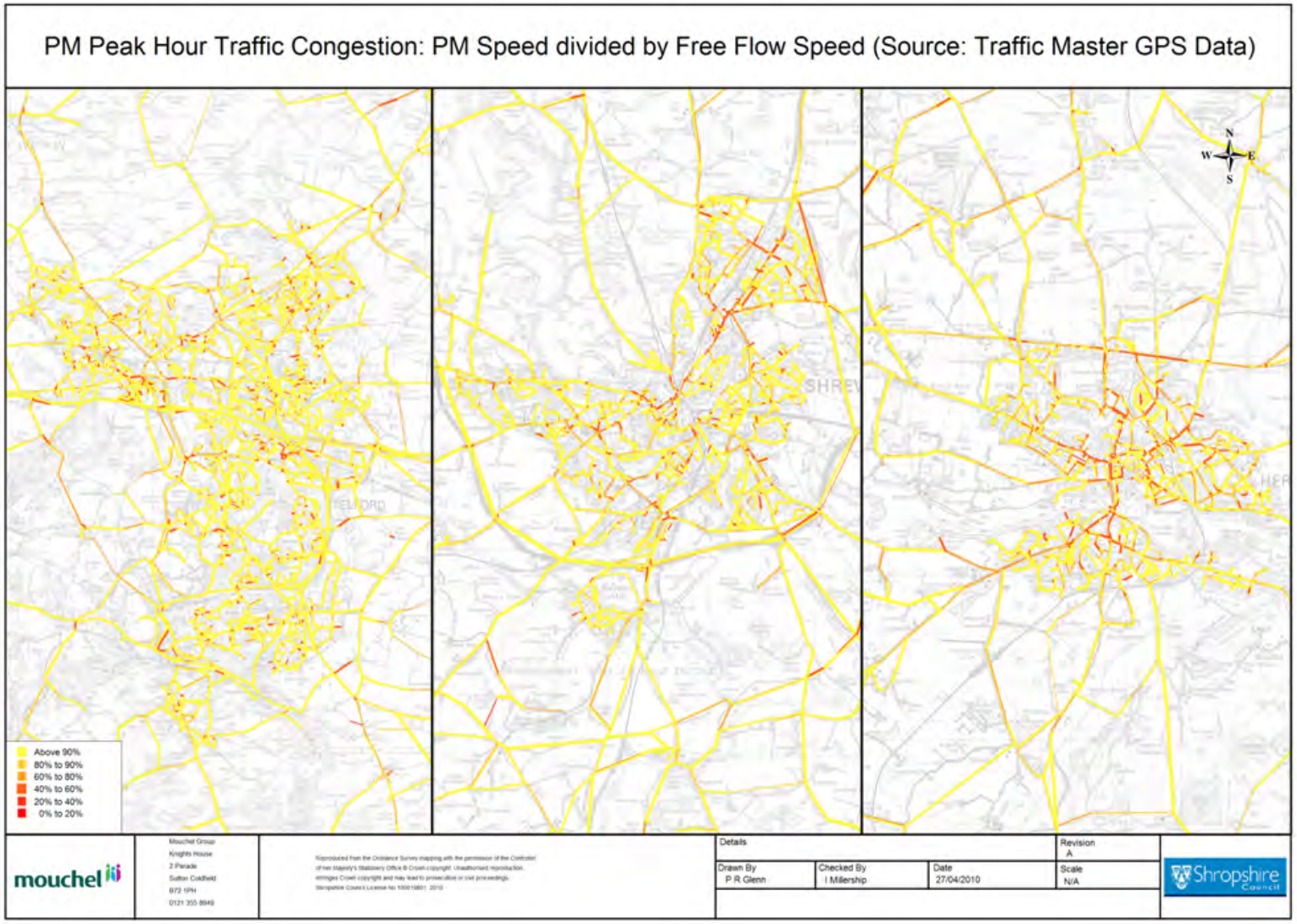

Figure 3-16 DaSTS Settlements PM Congestion

In **Telford**, there is little if any evidence of significant congestion, except perhaps at a few isolated junctions and on the A5223 Whitchurch Drive. On this evidence, people driving into within or through Telford at peak hours will often experience no significant delay.

In **Shrewsbury**, there is (by this measure) evidence of congestion on the A5 bypass at its approach to the A5/A458 junction, on the A49 bypass, approaching the A5/A49 junction, on sections of the distributor ring road, in Frankwell (west of the Welsh Bridge), on the eastern and northern approaches to the town centre (especially the Whitchurch Road) and on Smithfield Road. Most road journeys into or within Shrewsbury in the peak periods will experience noticeable delay.

In **Hereford**, using exactly the same measure and scale, we see evidence of more serious congestion, affecting most of the main traffic routes including the main river bridge and most of the roads leading to it. On this evidence, most road journeys into, within or through Hereford in the peak periods will experience significant delay.

The emerging picture is of marked differences between the three places. Broadly speaking, at peak times people are likely to experience significant congestion in Hereford, noticeable congestion in Shrewsbury and relatively little in Telford.

Figure 3-17 adds a further dimension to this picture, highlighting “problem junctions” identified by the respective local authority and Highways Agency officers. Whilst this is subjective, it would not be difficult to verify these judgments in a more subjective way.

However for present purposes they highlight concerns in **Telford** about the capacity and performance of the M54 junction 5 and the A5/A442 Hollinswood Interchange, A442/A518 Trench Lock roundabout and A518/B5060 junction.

In **Shrewsbury**, both the HA and Shropshire Council are concerned about the junctions on the section of the A5 bypass shared with the A49. Junctions on the distributor ring road and at either end of Smithfield Road in the town centre are also highlighted.

In **Hereford** most of the main junctions on the A49, A438 and A465 are highlighted as “problem junctions” by Herefordshire Council.

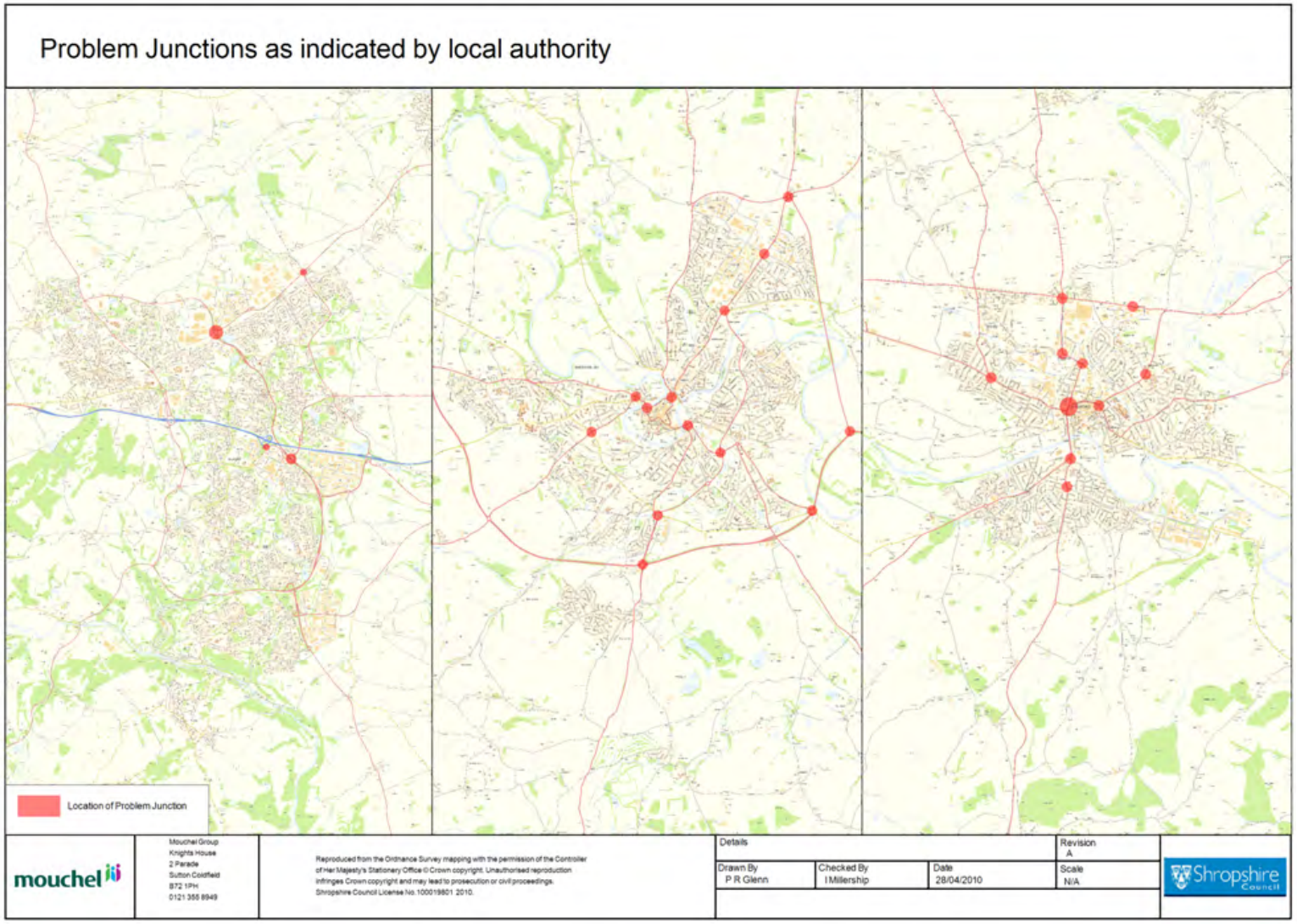

Figure 3-17 DaSTS Settlements Problem Junctions

Highway network performance – implications for growth

Telford has a high capacity road network which is also performing well, providing a high level of service. Of the three towns studied, it would appear to have the most capacity to accommodate additional traffic demand resulting from housing growth. The challenge for Telford is to ensure that new development is located in areas where the network can best accommodate extra demand, or where additional capacity can be provided.

Parts of **Shrewsbury's** road network are congested, and there are some problems with the performance of key bypass junctions and some approaches to the town centre. All things being equal, growth could make these problems worse or more widespread. The location of new development will be a critical issue, and different patterns may have different levels of impact. A separate study is examining this issue. For Shrewsbury the challenge will be to get the right balance between encouraging alternatives to car use, improvements to critical junctions and possible new road capacity.

Hereford has a relatively congested road network and anecdotal information about congestion is borne out by the observations we have made in this report. On the presumption that growth means more traffic, the scale of growth envisaged for Hereford raises serious concerns about the likely impact of this traffic on an already congested network with significant constraints to free movement. All things being equal, additional demand could further restrict the movement of existing users. A key challenge for Hereford is whether it is feasible for the city to grow further without provision of a relief road.

Use of public transport networks

All local authorities monitor bus patronage in order to report on BVPI 102 – (local bus journeys originating in a local authority area). Information at a town or city level is less readily available and may not be comparable between the different study settlements.

BVPI 102 monitoring in **Telford and Wrekin**[17] shows an overall decline in bus use between 2005/06 and 2007/08, underperforming the target trajectory by 6%. The decline was evident on both rural and **Telford** services, following a period of growth in both. The Council's view is that this reflects the fact that all the major improvements, including quality bus routes and new bus infrastructure, were introduced in the early part of the 2006-2011 LTP2 period, and are in need of a refresh.

Bus user satisfaction surveys, undertaken in Telford Town Centre in 2007, show a decline in satisfaction from a peak of about 70% to about 40% in recent years . These surveys covered satisfaction with bus frequency, reliability, information and waiting facilities. Whilst it is always difficult to tell whether public opinion reflects an actual or perceived decline in quality, these results are important.

Telford and Wrekin Council see the downturn in the housing market and wider economy as being likely to make it more difficult to achieve their targets for public transport growth. Rapid population growth underpinned some of the improvements reported in the previous LTP period (2001 – 2006). Two problems are now evident: many of the vehicles introduced in that period by the local operator, Arriva, are now reaching the end of their service life and no

[17] LTP (2006 – 2011) Delivery Report 2008, Telford and Wrekin Council

longer contribute to perceptions of a quality service. Also, in the present economic circumstances, operators are reluctant to invest in new vehicles, and the bus network itself is very vulnerable to contraction as a result of commercially based decisions. Marginal services may be reduced, to save operating costs, and without significant competition in the market, these are unlikely to be replaced. Likewise, the Council considers itself unlikely to be able to fund an expansion of subsidised services.

Monitoring in **Shropshire** shows that bus use in the County generally increased between 2005/06 and 2008/9. Although data for **Shrewsbury** bus services are not available separately, the Council reports an increase in patronage of Shrewsbury Park and Ride from 2004/05 until 2006/07, since when patronage has declined slightly.

Table 3-9 Shrewsbury Bus and Park and Ride Statistics

	2004/05	2005/06	2006/07	2007/08	2008/09
Shropshire bus passenger journeys (million)	6.457	6.425	6.678	6.722	6.764
Shrewsbury Park and Ride journeys (million)	1.150	1.224	1.291	1.286	1.258
Satisfaction with bus services	52%	-	57%	-	-

Within **Hereford City**, bus travel has declined significantly since 2001. Between 2003 and 2005, Hereford experienced a 50% reduction in the frequency of commercially operated journeys and this had a dramatic effect both in terms of the number of bus passenger journeys and the level of satisfaction recorded for bus services. In 2001/02 there were 2.5 million bus passenger journeys within Hereford, by 2005/06 this had declined to 1.5 million. The position then stabilised and bus use in 2008/09 was still recorded at 1.5 million journeys. This reduction is attributed to the withdrawal of commercial services by the local bus operator.

Over the same period, the number of bus journeys in rural areas of **Herefordshire** actually increased by about 0.8 million. This increase is attributed to investment to replace ageing buses with modern fully accessible vehicles as part of the Council's Low Floor Bus project.

This very striking contrast indicates that the patronage of local bus services is, unsurprisingly, affected by the number and quality of services available, and this in turn depends on the ability and willingness of private operators and local authorities to invest in bus services.

Performance of the public transport networks

As part of their 2009 Local Transport Plan Delivery Report, local authorities are required to analyse and report on trends and changes in bus service performance. This includes the monitoring of service reliability and punctuality, as defined by National Indicator NI178 (formerly LTP mandatory indicator LTP5). Compliance is defined as the percentage of buses up to 1 minute early or less than 6 minutes late.

NI178 reporting is unfortunately not available at a town or city level, so the figures below must be taken as a rough guide only.

Table 3-10 Bus Service Performance Statistics

Bus services running on time	2007	2008	2009
Telford and Wrekin[18]	78.0%	75.8%	80.9%
Shropshire	79.6%	69.6%	72.3%
Herefordshire	69%%	67%%	80%%

Bus reliability overall has improved since 2007 in Telford and Wrekin and Herefordshire, but it has declined in Shropshire. In all areas, there has been an improvement since 2008.

In **Telford**, only one route is defined as "frequent" – this being Service 44 (Redline). Overall results for the past 3 years[19] are given below:

Table 3-11 Telford Service 44 Waiting TImes

Excess waiting time on 'frequent services'.	2007	2008	2009
Redline, Telford	1.09 min	1.72 min	1.04 min

As before, there has been an improvement in the past year, though it is not clear why this has occurred.

Overall, whilst the data is patchy, the general picture with regard to public transport in the three study settlements is not particularly encouraging. There are signs that bus patronage in the urban areas has started to decline. Investments and innovations made in earlier years are no longer new. Although measured performance is holding up, buses and infrastructure are ageing. The real time passenger information system in Shrewsbury is no longer in use, because of the cost of maintaining it. In straitened economic circumstances, when in theory over time one might expect bus use to replace car ownership and use, the more immediate impact is for operators to contract their services, just when local authorities are less well placed to step in with subsidies.

Although buses are, by their nature, more suited to town or city transport, the availability of Rural Bus Grant and the fact that a high proportion of rural services are subsidised, means that in recent years those local authorities with large rural areas may have tended to focus more on ways of maintaining and improving rural transport services, rather than those in urban areas.

[18] Average of %compliance at start of route and at intermediate points

[19] Telford & Wrekin 2009 LTP Delivery Report July 2009 prepared by Tim Wastling, (Jacobs).

Public transport performance: Implications for growth.

In simple terms, there is evidence that bus use can be increased by investing in new and improved services, particularly where these have a strong, attractive image supported by good quality vehicles and infrastructure and active promotion and marketing. However, as the bus fleet and facilities get older, patronage can fall, even if reliability remains reasonable. Bus services are vulnerable to market downturns. When commercial services are reduced, and not replaced, bus use inevitably falls.

Bus services can be funded through planning agreements with developers. However, such agreements may only provide the initial capital investment, or subsidy for a limited period. There is clearly a danger that, over time, such services may lose passengers or cease operating.

If now development in Telford increases housing density overall, this could help make bus services more reliable.

If bus services are to play a part in meeting the transport demands of new development, we need to find more reliable ways of funding and maintaining bus services, vehicles and infrastructure over the longer term.

The decision to leave the car at home and use the bus instead is not an easy one for people in medium sized settlements, and will only happen if the bus offers something extra in terms of quality, convenience and image. There appear to be thresholds of quality, below which people will only use buses if they have no alternative, and above which people perceive buses differently, as an attractive, credible choice in an urban setting. The challenge is perhaps how to break through the upper threshold (and stay there) without incurring the high costs of a tram or bus rapid transit scheme.

Use and performance: Cycling and Walking

As we have seen, the level of cycle use appears very different in the three settlements.

Telford has significantly less cycling to work than the other places. However there is evidence in the LTP delivery report of a 16% increase in cycling between 2003/4 and 2006/7 and a 35% increase between 2003/04 and 2008/09. Evidence is quoted of strong increases in Wellington and Telford, especially in relation to the Hortonwood / Hadley Park industrial area which is close to residential areas. However these increases are from a relatively low base.

Although overall levels of cycling in **Shrewsbury** are higher than in many other places in England, they are considerably lower than they were a few decades ago. In Shrewsbury and Atcham, the proportion of work journeys by cycle fell by 36% between 1971 and 2001. In recent years there is evidence that cycling has increased. Limited data from four count sites installed in March 2006 showed a 12% increase from 2006 to 2007 and a further increase in 2008. Shrewsbury's cycle network links schools and residential areas, but cycling within the town centre can be difficult.

In **Hereford**, a 15% increase has been recorded in cycling between 2003/04 and 2008/09, although the rise has not been uniform; it was 18% higher in 2006/07. Hereford has higher levels of cycling to work that the other two settlements.

Overall, there does appear to be evidence of increased cycling in all three settlements, although data is very patchy. There is a general view that increased cycling is a result of steady network improvements, Safer Routes to School programmes and general promotion of cycling as a healthy mode of travel.

Use and performance: Rail

Although only a small percentage of overall journeys in each settlement are made by train, this belies the importance of rail as a mode of travel. Good rail links are seen as essential in attracting inward investment. Rail provides an attractive alternative to the car for long distance journeys, and enables commuting to take place to larger cities including London.

Table 3-12 Rail Station Patronage

Passengers	Telford %			Shrewsbury %	Hereford %
	Central	Wellington	Oak'gates		
2006/07	781,319	365,027	16,805	1,342,789	854,475
2007/08	799,039	388,808	23,567	1,460,861	899,199
2007/08 (interchange)	855	0	0	150,736	29,744
Growth	2.3%	6.5%	46.5%	8.8%	5.2%

Shrewsbury is the busiest station in terms of entries and exits, with nearly 1.5 million during 2007 / 2008. Hereford has the next highest usage, just under 900,000; with Telford Central just under 800,000, Wellington just under 400,000 and Oakengates less than 25,000. All stations have shown growth in numbers, ranging from 2.3% to 46.5% between 2006/7 and 2007/8. The very large increase at Oakengates is believed to relate to the extension of this service through to Birmingham during that year. Longer term data is available for Shrewsbury showing nearly 30% growth between the rail years 1999/2000 and 2008/2009. There is anecdotal evidence that high peak hour loadings at all stations are suppressing the potential demand for services in all cases. When new or improved services are introduced, significant growth appears possible.

The introduction, in 2008, of the Wrexham and Shropshire direct service to London Marylebone from Shrewsbury and Telford means that all three settlements now have a direct rail link to London. Usage of the Wrexham & Shropshire service has increased steadily since its inception, and there is anecdotal evidence that passengers sometimes choose this service for its comfort and convenience, even when there are faster alternatives available.

Rail use and performance – implications for growth

Journeys by rail make up only a very small proportion of overall travel in the study settlements, and there is little if any local commuting by rail. Rail is an important mode for people making long distance journeys, and as the three settlements increase in size, demand for rail travel is likely to increase proportionally. Whilst services have generally improved in recent years, and patronage increased, there are signs that this is being limited by lack of

capacity. There is scope to maintain, or increase, long distance mode share by rail as the settlements grow, but only if these issues are addressed, including those related to access, passenger facilities and parking at stations.

3.5 Smarter choices health checks

Smarter choices initiatives have been pursued in each of the three study settlements. As part of this study, a "health check" has been undertaken to determine what has been achieved, and to understand what the challenges and opportunities are in each place. This leads to a short and longer term prognosis for the role of smarter travel as a way of enabling growth.

The health check process

The health checks begin with an assessment of the smarter choices actions that have been undertaken in each place (such as the development of travel plans) and, where known, the outcomes of these actions (such as the take-up of car sharing schemes). They consider whether there are any local conditions which may help or hinder smarter choices initiatives, including different levels of cultural acceptance.

Through discussions with appropriate officers, we seek to understand the types of interventions that work, or are considered appropriate, in each of the study settlements. This provides a strong local perspective and helps us understand better how individuals and neighbourhoods make their travel choices. This intelligence is used in later stages as an aid to identifying interventions and determining priorities.

The health checks take account of the information assembled from the 2001 census of travel patterns, as well as the other information described in the preceding sections of this report. In addition, we have reviewed:

- School and workplace travel plans
- Selected travel plans related to the planning process
- Current SMoTS (Sustainable Modes of Travel to School) strategies
- Promotional and educational material

In discussion with sustainable transport and travel planning staff in each authority we have explored the key challenges facing them in developing and delivering projects, to understand the tools and resources they need. This helps us understand which projects have been most successful and which have not worked as well. This leads to a diagnosis of the types of intervention likely to be successful in addressing planned growth, and feeds in to the later sections of this report.

The health checks for each town are set out in Appendix 4 and summarised below:

Healthchecks – Common Issues

All of the three towns have experienced success with travel planning, particularly in the recognising the need to lead by example through the delivery and maintenance of an effective Council travel plan

They have all sought to proactively engage workplaces and schools, and specifically the schools sector and 'school run' traffic has been well tackled in all 3 towns

In terms of marketing and promotion, all 3 towns have recognised the importance of information and web-based intelligence as vital to keep the profile of sustainable travel high – however the way in which this is presented and used is highly tailored to the cultural, social and economic drivers for each of the towns, and is sympathetic to the motivators and public acceptance of environmental, commercial and regulatory messages given by the local authority.

All three town have recognised the key role of partnership and the importance of the health sector to address reductions in single occupancy car use

Final all three town have recognised the high level of return through effective, targeted revenue-based activities and the importance of some of the products that have been delivered. However the evidence from al 3 towns demonstrates the importance of the 'human resource' side of sustainable travel, and the need for sufficient skilled and professional staff in place to engage effectively with the local community. Ongoing resources and long-term planning for smarter travel and wider sustainable transport projects was identified as vital for the success of a pro-sustainable travel strategy for any one of these growth locations.

Summary of smarter choices/sustainable travel healthcheck: Telford

In terms of **key metrics**, the Telford 'situation' can be summarised as:

- In Telford, the car ownership of 1.1 per household is equal to the regional and national averages. Just over three quarters of households have access to a car which is slightly higher than the regional and national averages.
- 18% of journeys to work are made by sustainable modes of transport, which is slightly lower than the regional and national averages.
- 7.3% of people work from home which is below the regional and national averages.
- Cycling to work in Telford exceeds the regional average but is slightly below the national average.
- Walking to work is below the regional and national averages.
- Telford people's own assessment of their wellness and long term illnesses are slightly better than that for the region but lower than the national average.
- Cars are used for about 50% of trips to primary schools.
- Walking to primary school has stabilised at 43%.
- Cycling to primary schools has stabilised at 1%.
- Cars are used for about 32% of trips to secondary school (up from 29%).

- Walking to secondary schools has stabilised at 48%.
- Cycling to secondary schools has stabilised at 3%.
- Bus travel to secondary schools has stabilised at 15%.

And in terms of **diagnosis** the headlines for Telford are:

- Workplace Travel Plans (WTPs) are mainly "statements of intent", and do not detail the actual capacity of the organisation to achieve modal shift. Baseline surveys and targets need tightening. It will need the Council to lead by example through its refreshed corporate travel plan to re-ignite enthusiasm in this area. Telford and Wrekin Council is leading by example with its own Travel Plan for 783 staff and numerous initiatives such as pool cars, cycle parking and car sharing and a strategic review of mileage payments
- Planning-led travel plans predate current best practice guidance from DfT and have not been reviewed since their conception. Therefore, it is not possible to know whether their targets have been met, although there have been positive action to develop 2 key residential travel plans in the town already.
- There is no SPG/SPD and the Section 106 route is not currently used to secure travel plans; instead conditions tend to be used. The Council is open to alternative approaches and to developing guidance.
- All WTPs promise robust monitoring through annual surveys, but there is a lack of baseline data on mode share. Workplace travel planning is generally limited with little follow-up activity and little evidence of high level commitment from businesses.
- The SMoTS strategy for 2005 – 2011 was updated in 2009 and is very clear on measurement and monitoring with a full action plan.
- There are strong links to health and wellbeing, parental choice on admissions, home to school transport, and integration of best practice into new and extended schools.
- Overall, school travel planning activities are wide ranging and pursued vigorously. There is a firm foundation for further Smarter Choices work in schools, and a mature approach to this work. Schemes are considered likely to succeed.
- Publicity and promotional material is being used to reach target markets, with a strong emphasis on cycling, walking and health.
- Staffing levels are healthy at present but have relied on a high proportion of fixed term contract staff which will limit the opportunity for delivery of schools and health sector work in the future. Given the success of the softer programmes in engaging on health issues this would should be capitalised upon in any forward strategy.
- Overall, Telford is managing to remain static in terms of modal split which should be seen as an achievement considering Telford's historical car culture.

Summary of smarter choices/sustainable travel health check: Shrewsbury

In terms of **key metrics**, the Shrewsbury 'situation' can be summarised as:

- Households in Shrewsbury are more likely to have at least one car than the average for the region or the country. Three quarters of households have access to a car.
- 28% of journeys to work are made by non-motorised modes of transport.
- 8.6% of people work from home, slightly below the average for the region or the country.
- Cycling to work is more than double the national average
- Walking to work is about one third more than the national average
- Shrewsbury people's own assessment of their wellness is slightly above that for the rest of the region and the country
- Cars are used for about 33% of trips to primary school
- Walking to primary school has increased to 54%
- Cycling to primary schools is stable at 3%
- Cars are used for about 20% of trips to secondary school (up from 19%)
- Walking to secondary schools has stabilised at 58%
- Cycling to secondary schools is at 10% and is increasing
- Bus travel to secondary schools has stabilised at 8%

And in terms of **diagnosis** the headlines for Shrewsbury are:

- Workplace Travel Plans are mainly "statements of intent", and do not detail the actual capacity of the organisation to achieve modal shift. Baseline surveys and targets need tightening. Again leadership from the Council is required to elevate the importance of travel plans and also to address the 'legitimacy' issue of employers charging for car parking. The Council is leading by example with its own travel plan for 2,000 staff and numerous initiatives such as pool cars, cycle parking and car sharing and a strategic review of mileage payments.
- Planning-led travel plans predate current best practice guidance from DfT, and have not been reviewed since their conception, so it is not possible to know whether their targets have been met.
- The SMoTS strategy for 2005 – 2011 is very clear on measurement and monitoring with a full action plan
- There are strong links to health and wellbeing, particularly through the Cycling Demonstration Town Programme. The School travel plan programme has been particularly successful with 'difficult' sized catchments to work with There is evidence of

localisation of school catchments and that parents consider family logistics in choosing schools

- Publicity and promotional material is being used to reach target markets, with a strong emphasis on cycling.
- Overall, Shrewsbury is managing to “freeze” the mode shift towards car use as levels of walking and cycling increase
- Some residents seem to think of Shrewsbury as a rural location and do not consider alternatives to the car. For many trips, if a car is available it will be used.
- The designation of Shrewsbury as a cycling town is a strong lever for promoting smarter choices and needs to be a priority in terms of capitalising on sustainable modes going forward
- Promotional bus fares and use of Park and Ride for car sharing or cycling have not been fully exploited
- In order to achieve a step change in sustainable travel, long term staffing for travel planning and rolling forward the Cycling Demonstration Town work will be needed

Summary of smarter choices/sustainable travel healthcheck: Hereford

In terms of **key metrics**, the Hereford ‘situation’ can be summarised as:

- In Hereford, the car ownership of 1.1 per household is equal to the regional and national averages. Just less than three quarters of households have access to a car which equals the regional and national averages.
- 32% of journeys to work are made by sustainable modes of transport, which is much higher than the regional and national averages (21% and 22% respectively).
- 9.4% of people work from home which is higher than the regional and national averages.
- Cycling to work in Hereford far exceeds both the regional and national averages at 8%.
- Walking to work far exceeds the regional and national averages at 15%.
- Hereford people’s own assessment of their wellness (81%) is slightly worse than that for the region (82%) but is the same as the national average. Long term illnesses (19%) are the same as the national average but slightly worse than the regional average (18%).
- Cars are used for about 34% of trips to primary schools which is an improvement from 36% in 2007.
- Walking to primary school has increased by 1% to 55%.
- Cycling to primary schools has stabilised at 2%.

- Cars are used for about 18% of trips to secondary schools (slightly up from 17%).
- Walking to secondary schools has increased to 57% from 56% (07-09)
- Cycling to secondary schools has stabilised at 5%.
- Bus travel to secondary schools has declined from 19% to 17%.

And in terms of **diagnosis** the headlines for Hereford are:

- Workplace Travel Plans (WTPs) have seen particular advancement in Hereford particularly with the establishment of the Rotherwas Industrial Estate Zonal Travel Plan
- The SMoTS strategy for 2006/7 to 2010/11 published in 2009 is very clear on measurement and monitoring with a full action plan.
- The level of staff resources and the way in which the sustainable travel team is organised has brought particular benefits and efficiencies. This has enabled the Council to provide a wide-ranging sustainable travel service.
- There is a firm foundation for further Smarter Choices work building on the higher levels of walking and cycling already found in this town compared to the other growth points. The compactness of the city ends itself to this approach.
- Publicity and promotional material is being used to reach target markets, with the Hereford City Map being the most valuable product in the Council's promotional range
- Overall, Hereford is managing to remain static in terms of modal split and is maintaining walking and cycling patterns around the town centre despite severance issues arising from the A49.
- There are a number of key physical links which could positively unlock further increases in active travel, including the provision of a pedestrian/cycle bridge link over the River Wye to connect the Rotherwas Industrial Area to the city centre.
- The Council in proactively addressing its policy position of smarter choices and looking at best practice from which to develop its own SPD on travel plans.

Chapter 3: The way things are now: travel and transport

Summary of key findings

- ***Telford has the best connections to the national and regional road network All three places have relatively good rail connections, though Hereford is more remote than the other two places.***
- ***The three settlements are relatively self-contained, with a high percentage of people living and working in the same town or city: Telford (79%) Shrewsbury (72%) and Hereford (76%).***
- ***All three places have a net daily influx of employees, mainly from their immediate hinterland. About 10% of working residents of Shrewsbury commute to Telford, but apart from this there are no dominant patterns of commuting beyond the local area of each settlement.***
- ***Telford has polycentric structure with a modern, high capacity road system which is relatively free flowing, having only a few problem areas.***
- ***Shrewsbury has an historic radial road network to which has been added a partial inner ring road and a partial outer bypass. There is congestion in the sector of the town which has neither ring road nor bypass, and increasingly at both inner and outer bypass junctions at peak times.***
- ***Hereford has no bypass and only one principal crossing of the Wye which divides the town. Congestion is already a significant problem, even without new development.***
- ***In all three places, most people drive to work, but there are marked differences between them: In Telford, 64% drive themselves to work, compared with 58% in Shrewsbury and only 54% in Hereford.***
- ***Bus services are varied, with some parts of each settlement better served than others. Usage is fairly low, with only 6% using bus or train for work journeys in each place. After a period of growth, there are concerns that bus use could level off or services decline in popularity.***
- ***Some 32% of people in Hereford travel to work by low carbon modes (walking or cycling) or work at home. The equivalent number is 28% for Shrewsbury and just 18% for Telford.***
- ***All three places have extensive cycle provision, though there is room for improvement.***
- ***In their different ways, all three places have pedestrian-friendly town centres, but access to these centres on foot is less easy, especially for Telford.***
- ***On the evidence, Hereford has the most sustainable pattern of transport, and Telford the least, as it is most dependent on the private car. In Shrewsbury, there is some indication that newer developments may be less sustainable than established residential areas, irrespective of their distance from the centre.***

Key challenges

Walking

- ***A challenge for Shrewsbury and Hereford is to understand protect and enhance those characteristics of place which make it easy and attractive for people to walk.***
- ***A challenge for Telford is to use new development and increased density as an opportunity to create variety, interest and orientation for journeys on foot***
- ***The challenge for all three settlements, as they face substantial growth, is to pay unprecedented attention to the built form and function of new development, to avoid any pressures of developers for car-dominated schemes, and deliberately to build in those details which really work for people on foot.***

Cycling

- ***The challenge in Shrewsbury and Hereford is to maintain and develop the cycling culture through a combination of hard and soft measures to support and facilitate cycling***
- ***The challenge in Telford is to use the anticipated new development to create an urban form and density that is more conducive to cycling and walking***

Public transport

- ***A challenge for all three places is to prevent decline in urban bus services and ensure that good services are available as soon as housing and employment areas are developed***
- ***A further challenge for Shrewsbury and Hereford will be to maintain and improve the reliability of bus services on increasingly busy local road networks***
- ***A challenge for Hereford, where Park and Ride is proposed, is to address the needs of people driving towards the city for work as well as for shopping and recreation***
- ***A big challenge for all three places, as they grow, is to determine whether they are capable of achieving a radical improvement in the quality and image of public transport, to a point where it becomes an attractive alternative even for people who have use of a car.***

Gaps in evidence

Possible gaps in the evidence are:

- ***There is a need to examine further the way that the physical layout of new development influences people's use of sustainable transport.***

4 Planned Growth and Development

This chapter describes the new housing and employment development which is planned for each of the study settlements. Whilst the total amount of growth has been set in line with the Regional Spatial Strategy, the exact distribution in each place is still under consideration as part of the LDF process.

In each settlement, further work to determine the optimum pattern for growth is being undertaken by local authorities in parallel with the delivery of committed developments and planning for improvements to the public realm and local highway networks. Using information from available transport models, we examine the likely impact of planned growth on local transport networks, both with and without planned improvements.

This sets the scene for a detailed consideration (from Chapter 5 onward) of the potential for a fuller range of options, including smarter choices, to help enable growth.

4.1 Proposed housing and economic growth

As part of the national and regional growth agenda Telford, Shrewsbury and Hereford are expected to see significant housing, population and economic growth over the coming 15 – 20 years. Within these planning areas, up to 40,000 new homes could be built over the period 2006 to 2026.

The West Midlands RSS Phase 2 Revision Panel report of October 2009 gives the indicative housing allocations for each town as set out below

Table 4-1 Indicative Housing Allocations

2006 2026	Telford	Shrewsbury	Hereford
Additional houses	25,000[20]	6,500	8,500
Existing households	53,940	27,786	22,000
Percentage increase	46%	23%	39%

Telford is set to grow by more than the other settlements, both in absolute and relative terms. Hereford has less planned growth in absolute terms but in percentage terms it is set to grow by more than Shrewsbury.

Each of the three study settlements is at a different stage in identifying specific sites for these new houses. Whilst we can report on this, it is beyond the scope of this study to do the job of identifying or prioritising suitable sites, so we are dependent on the information that has been made available by the respective local planning authorities.

[20] The figure for Telford and Wrekin is 26,500

For **Telford**, the Phase 2 revision of the RSS proposes development at a rate of 800 dwellings per year between 2006 and 2011, rising to 1,165 per year between 2011 and 2026. This will deliver the 25,000 required by 2026.

The Local Development Framework (LDF) Annual Monitoring Report 2009 states that, of the 26,500 houses required to be built in Telford and Wrekin between 2006 and 2026 at 1st April 2009, land for 14,400 had yet to be identified in Telford and 1,050 in the rest of Telford and Wrekin.

In total, by September 2009 some 4,900 houses were already committed in the Borough and likely to be built in known locations by 2012. The committed sites are set out in Table 4.2 below.

Some 2,580 are proposed in Central Telford area (covered by the Central Telford Area Action Plan. These are included in the growth point scenario.

Table 4-2 Committed housing sites, Telford

	Commitments (Telford)
Lawley village	3,000
Lightmoor urban village project	800
Ketley Millenium Village	700
Station Road, Donnington	200
Britannia Way, Hadley	200
Total	**4,900**

The locations of the remaining houses to fulfil the RSS Phase 2 total will be within Telford's District Centres and in locations highly accessible to the District Centres. This location strategy will apply until 2016 at which point the Council will produce a new spatial development strategy (Core Strategy DPD) for the period 2016 to 2026.

For **Shrewsbury**, the Council has considered a large number of possible sites for the location of new housing and employment growth, and has grouped these into eight different growth scenarios for assessment.

The potential housing sites and combinations are set out in Table 4.3.

The potential employment sites and combinations are set out in Table 4.4.

Table 4-3 Potential housing sites, Shrewsbury

	Options							
Housing (dwellings)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Between Welshpool Rd & proposed NWRR	750	0	750	0	750	0	0	0
Land South of Otley Rd	750	750	0	750	0	0	0	0
Land North of Otley Rd	250	250	0	250	0	0	250	0
Background distributed as existing over Shrewsbury Urban area	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900
North of Old River Bed – Outer – changed to South of Old River Bed	0	500	0	0	0	250	0	0
South of Old River Bed - Inner	0	0	750	0	0	0	0	0
Rear of Lion Coppice – land off Shillingston Drive	0	250	250	0	0	250	0	0
Promoted Land	0	0	0	750	1,000	1,250	0	250
Preston St	0	0	0	0	0	0	300	300
London Rd south of Crematorium	0	0	0	0	0	0	1,200	1,200
Total	**6650**	**6650**	**6650**	**6650**	**6650**	**6650**	**6650**	**6650**

Table 4-4 Potential employment sites, Shrewsbury

	Options							
Employment (sq. m)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Between Welshpool Rd & proposed NWRR	42,000	0	42,000	0	42,000	0	42,000	42,000
Land South of Otley Rd	87,500	87,500	0	87,500	0	0	87,500	0
Land North of Otley Rd	5,250	5,250	0	5,250	0	0	5,250	0
North of Old River Bed – Outer – changed to South of Old River Bed	0	31,500	103,250	0	0	31,500	0	0
Thieves Lane	21,000	21,000	0	21,000	0	0	21,000	0
Town Centre	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
West of Battlefield Rd	0	10,500	10,500	0	0	10,500	0	0
Employment Site – leading to Hanwood Rd adjacent to A5	0	0	0	42,000	113,750	113,750	0	113,750
Total	**175,750**	**175,750**	**175,750**	**175,750**	**175,750**	**175,750**	**175,750**	**175,750**

For the purposes of this study, Shropshire Council has advised that Option 1 should be used to indicate the general impacts of growth. A separate, more detailed study is being undertaken to evaluate and compare the eight options in terms of traffic impact and sustainability.

For **Hereford**, the Council has considered a number of broad options for the possible locations of the 8,500 additional houses required by 2026. These include committed developments as follows:

Table 4-5 Confirmed housing sites, Hereford

	Commitments (Hereford)
Edgar Street Grid	1,000
Whitecross	980
Other citywide	500

A further 865 houses had already been built or firmly committed at various locations in the period 2006 – 2009.

Possible sites within Hereford have been identified for the additional houses required to meet the Growth Point targets. These are:

- Whitecross (additional)
- Three Elms Road / Kings Acre
- Bullinghope
- Holmer West
- Holmer East
- Citywide (additional)

Possible sites for employment growth have been identified. These are:

- Edgar St Retail
- Edgar St Office
- Holmer East
- Rotherwas
- Roman Road

The Growth Point targets for Herefordshire also require a significant number of new homes in the urban fringe of Hereford, rural Herefordshire and the market towns.

The Council is presently considering four alternative growth point scenarios, each representing a different distribution of the planned housing and employment growth.

For Hereford these options are set out in Table 4.6 below:

Table 4-6 Possible housing development options, Hereford

Housing	1 North-West	2 South - West	3 North-South	4 Dispersed
Edgar Street Grid	1,000	1,000	1,000	1,000
Whitecross	2,000	2,000	0	1,500
Three Elms Rd / Kings Acre	2,000	1,500	2,500	1,500
Bullinghope	0	1,000	1,000	1,000
Holmer West	500	0	500	500
Holmer East	0	0	500	0
Other Citywide	1009	1009	1009	1009
Built/committed 2008-2008	1,791	1,791	1791	1791
TOTAL	**8,300**	**8,300**	**8,300**	**8,300**

When these options were drawn up by the Council, the growth point target for Hereford was 8,300 houses. This has since been changed to 8,500. For the purposes of this study, we do not consider this a problem. As no new modelling is being undertaken, we have used the Council's analysis based on the lower target.

Similarly, the Council has considered a slightly different distribution of employment growth for each of the four scenarios. These are set out in Table 4.7 below:

Table 4-7 Possible employment development options, Hereford

Employment (,000 sq.m.)	1 North-West	2 South - West	3 North-South	4 Dispersed
Edgar St Retail	60	60	60	60
Edgar St Office	45	45	45	45
Holmer East	150	150		150
Rotherwas	250	250	300	250
Roman Road	100	100	150	100
TOTAL	**605**	**605**	**605**	**605**

4.2 Major infrastructure schemes under construction

In each of the three study settlements, major highways schemes are under consideration, and these are – to some extent at least – linked to the growth agenda for each place. In Telford and Hereford there are also major central area regeneration proposals. Dealing with each of these in turn:

Telford

One of the key elements of Telford and Wrekin Council's overall vision for 2026 is the **regeneration of Telford Town Centre**. The Council, Housing and Communities Agency and Advantage West Midlands are working together to deliver the project. The stated vision is to create an 18 hour, seven days a week, vibrant and sustainable heart for Telford, including leisure and cultural facilities, City Living apartments and family housing, integrated into commercial, mixed use and extended retail development, designed around new high quality public realm and public spaces. The existing town centre is an enclosed mall with extensive off street parking, surrounded tightly by a "box road". The Council wants to improve the "box road", to break the barrier which this creates, enabling the introduction of improved bus priority measures and better facilities for pedestrians and cyclists, including better links to the surrounding residential areas and to the railway station.

In transport terms, the Council's vision includes a £70m CTAAP Mitigation Strategy, including the Greyhound Link and improvements to the Forge Roundabout. The Greyhound Link would be located just to the north of the town centre and would provide a direct connection between Junction 5 of the M54 and the adjacent A442 dual carriageway between the existing Greyhound Roundabout and the Hollinswood Interchange.

The case for the Greyhound Link was included in the February 2009 RFA advice to DfT as a scheme for completion before 2014, pending the outcome of the then current CIF bid. The RFA advice stated that

"If CLG/DfT does not support the case for CIF for those schemes highlighted by the region as a priority then, given their importance, the region may seek to fund them from alternative routes, for example, through the Integrated Block or Regional Infrastructure Fund."

In July 2009, the RFA advice was updated to account for the fact that CLG/DfT did not support the case for the CIF bid.

The DfT has now expressed concerns regarding the level of over programming in the RFA and accordingly the advice is currently under review.

For the purposes of this study, we have used traffic future year forecasts which include growth currently proposed as part of the New Growth Point. Two scenarios are considered, one with dispersed housing, the other with higher density housing in the town centre and a Greyhound Link Road.

Shrewsbury

In Shrewsbury, Shropshire Council is promoting a **North West Relief Road** (NWRR) which would provide the "missing" sections of outer bypass and distributor ring road by creating a new crossing of the Severn to the west of the town. It would provide al alternative route long distance north-west through traffic and for local traffic between the northern and western parts of the town. The scheme has been included in the Regional Funding Allocation, and the Council is currently preparing a major scheme business case for consideration by the DfT, in the hope of securing programme entry.

The proposed scheme has been developed after consideration of a range of alternative options, including non-road options and alternative routes.

As proposed, the NWRR includes measures designed to "lock in" its benefits. In particular these include the reallocation of road space on Smithfield Road to give greater priority for pedestrians cyclists and public transport together with public realm improvements on this riverside road.

The Council's objectives for the scheme include:

- To support the economic competitiveness and growth of Shrewsbury and Shropshire by unlocking development potential, reducing congestion in the northern and western approaches and providing a more reliable and efficient transport network for Shrewsbury;

One of the sites identified for new housing and economic development in the LDF Core Strategy, the Shrewsbury West sustainable urban extension, is identified as having the potential to enable "the delivery of a leg of the proposed NWRR .. alongside a mix of housing, employment and community services provision". The traffic and economic case for the scheme has been tested against a future level of growth which includes that which is currently proposed as part of the Growth Point Agenda.

Hereford

In Hereford, plans are being taken forward for a major private sector redevelopment a 100 acrea site to the north of the city centre – the **Edgar Street Grid** (ESG) development. The vision is to transform Newmarket Street/Blueschool Street into a pedestrian friendly shared space, ending the barrier currently created by the Inner Ring Road. The scheme includes a new section of link road between Edgar Street to Commercial Street. Whilst the existing road would continue to carry traffic, a design led approach seeks to re-define it as a "civilised part of the city centre" with slower traffic, less street clutter and improved connectivity for pedestrians and cyclists.

The Council also aspires to the provision of a Relief Road for Hereford. The aim is to provide a second crossing of the Wye and relieve the city centre of through traffic, whilst distributing traffic more efficiently around the city.

The Relief Road was put forward as a potential scheme for the RFA in 2009 (as the Outer Distributor Road, ODR), but was not accepted for implementation before 2014 as it was considered premature by the DfT, who responded to the RFA saying:

"On Hereford ODR we recognise that the proposed housing growth will have implications for the transport network and may require significant investment. However, given the history of schemes in this area including the removal on environmental grounds of the previous Hereford Bypass scheme from the national roads programme in 1998 and that a specific alignment has not been agreed, we consider that the promoter should in line with the DaSTS approach to transport planning build on and expand its current study work and investigate a full range of options for addressing the transport challenges in the area. DfT will consider how it can best support this work."

The Council and the Highways Agency have examined alternative alignments for a Relief Road, testing these against a future level of growth which includes that which is currently proposed as part of the Growth Point Agenda. The results are set out in the Hereford Multi Modal Model Forecasting Report (September 2009). The study concluded that without a Relief Road, congestion would worsen in Hereford and this would be exacerbated by the Growth Point proposals but relieved by provision of a Relief Road. It found that an Eastern alignment produced the best overall network performance, and this option has therefore been assumed as representative of the Relief Road for the purposes of the present study.

Herefordshire commissioned a further detailed assessment of the route options in January 2010. This work includes investigating environmental, engineering and transport impacts of the modelled routes in order to select a preferred option for inclusion in further Local Development Framework consultation in autumn 2010. The study is being carried out in accordance with the New Approach to Appraisal (NATA) recommended by DfT to assess major schemes and will include a more detailed range of modelling options to be tested to include provision of a range of sustainable transport measures. The study should be completed by July 2010.

4.3 Travel demand associated with proposed development

Our approach in this study has been to use available traffic forecasts from existing models to compare, in broad terms, a future scenario including all planned growth with a scenario representing the base year. The aim is to give a clear and simple comparison between the situation we can observe now, and the situation we might face in the future, with planned development. No new modelling has been undertaken and this work is not in any way intended as a substitute for detailed modelling and assessment in the past, present or future. The models used are summarised in Table 3-8.

The available base year scenarios are for 2007 (Telford), 2006 (Shrewsbury) and 2008 (Hereford). All of these are considered to be close enough to 2006 for the purposes of this study.

The available future year scenarios are for 2027 (Telford), 2026 (Shrewsbury) and 2026 (Hereford). The future years for Telford, Shrewsbury and Hereford are similarly close enough to 2026 for our purposes.

Where a major highway scheme is under consideration, we have also looked at a future scenario which includes the scheme.

The amount of information available differs for each settlement. We have tried as far as possible to extract information which is informative and available for all three places, but we have included some additional information where it sheds light on the study, even if we do not have similar information for other settlements.

For **Telford**, Telford and Wrekin Council commissioned consultants to test a number of options for growth and highway network changes using the Telford Strategic Vissum Model. It is important to note that specific sites for the 26,500 houses are not yet available at this stage of the LDF process apart from committed housing development sites(4,900 houses) and the planned housing sites referred to in CTAAP(2770 houses). More refined testing of the RSS housing allocations will be undertaken later on in the LDF process using the new multi modal model that will be available in August 2010.The available scenarios that are of most interest to this study are:

Demand scenario: Network option	2007 base	2027 RSS Phase 2 forecast (committed development + balance distributed evenly	2027 RSS Phase 2 forecast (committed development + 2770 in town centre + balance distributed evenly)
2007 network	yes	-	-
Without Greyhound Link Road	-	yes	-
With Greyhound Link Road	-	-	yes

The Telford Strategic Visum Model was used in support of the Council's 2008 CIF Bid for the Greyhound Link. This linked provision of Town Centre housing growth to the Greyhound Link. Accordingly the forecasts provided in this report relate to this scenario. Information relating to the impact of Town Centre housing growth on Telford Town Centre without the Greyhound Link Road and the more dispersed housing growth pattern with the scheme is available from the Council. The impact of the RSS housing growth on the Telford network will be refined as part of the ongoing LDF process using the new multi modal model which will be available in August 2010.

The CTAAP VISSIM microsimulation model has been used to help design the mitigation strategy for the CTAAP development proposals. This work highlighted capacity problems on the Town Centre network by 2016 in the absence of a mitigation strategy.

For the purposes of this (DaSTS) study, we focus on the analysis of the Telford Strategic VISUM Model and the differences between the base year (2007) and growth point scenarios (2027). This gives an indication of the pressures which Telford's transport system will have to

deal with by about 2026, as a result of the RSS Housing alone, compared with the way things are now. For simplicity we present a limited number of key metrics.

More detail can be gleaned from the model forecasting report.

Figure 4-1 shows:

- forecast future year traffic in Telford for the morning and evening peak hours, both without ("do minimum") and with the Greyhound Link and associated development pattern.
- the forecast increase in traffic between 2007 and 2027 as a result of all the planned growth in that period.
- the forecast increase in traffic between 2007 and 2027 as a result of all the planned growth in that period, including 2770 new homes focused on the town centre and the Greyhound link.

For simplicity, all of the above figures are for the evening peak period. Figures for the morning peak are given in Appendix 2.

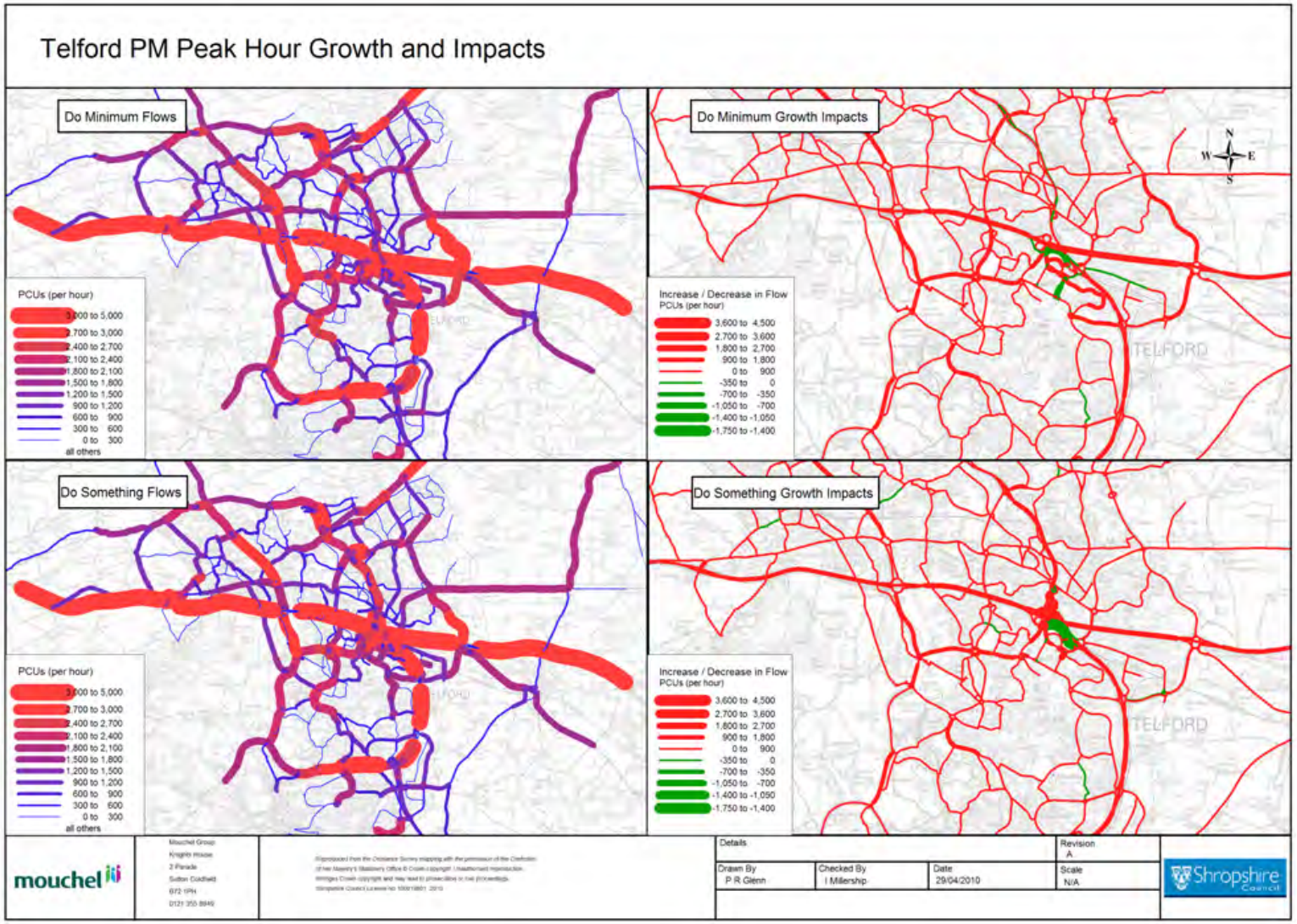

Figure 4-1 Telford Future Year Evening Growth and Impacts

For **Shrewsbury**, Shropshire Council commissioned Mouchel to assess a range of different patterns of development, to determine the likely impacts of potential housing and employment development as proposed in the Regional Spatial Strategy, and its impact on the road network in the Shrewsbury area.

A range of scenarios has been tested, and those that are of most interest to this study are:

Demand scenario: Network option	2006 base	2026 do something (committed development plus growth point option 1)
2006 network	yes	-
+ committed road schemes	-	yes
+ Shrewsbury NWRR	-	yes

A separate study for Shropshire Council is ongoing and will provide detailed comparisons of the options.

Figure 4-2 shows:

- forecast future year traffic in Shrewsbury for the evening peak hour both without ("do minimum") and with the NWRR
- the forecast increase in traffic between 2006 and 2026 as a result of all the planned growth in that period, both without and with a NWRR.

Overall growth in travel: Shrewsbury

Total person trips in study area	2008	2026	change
a.m. peak	29,800	38,000	+ 28%
p.m. peak	32,300	41,000	+ 27%

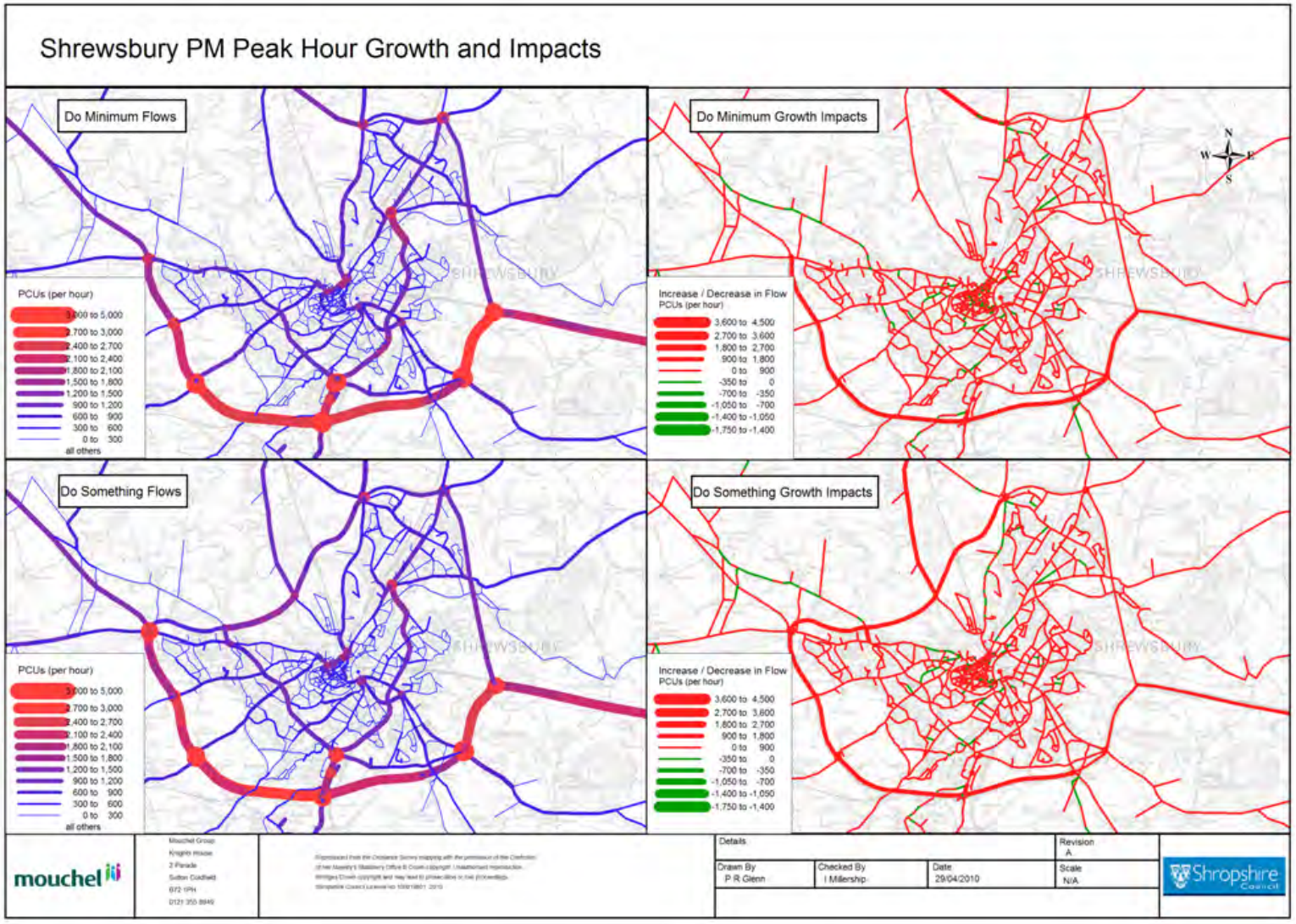

Figure 4-2 Shrewsbury Future Year Evening Growth and Impacts

For **Hereford**, Herefordshire Council and the Highways Agency commissioned JMP Consultants to develop a multi-modal transport model to determine the likely impacts of potential housing development as proposed in the Regional Spatial Strategy, and its impact on the road network in the Hereford area.

A range of scenarios has been tested, and those that are of most interest to this study are:

Demand scenario: Network option	2008 base	2026 do something (committed development plus 4 different growth point scenarios)
2008 network	yes	-
+ committed road schemes	-	yes
+ Outer Distributor Road (2 options)		yes

The Herefordshire Multi-Modal Model Forecasting Report describes the options and scenarios in more detail, and provides a summary of the model tests.

The “committed road schemes” include the highway works associated with the Edgar Street Grid redevelopment and a new 750 space Park and Ride facility to the north of the city.

The committed development represents the level of growth previously planned for Hereford, as described in 4.1 above.

The “do something” (growth point) scenarios assume a total of 8,300 new houses in Hereford, including these commitments and completions since 2006. The model tests therefore slightly under-represent the most up-to-date growth point scenario for Hereford City (8,500) by some 200 houses. For our purposes, this is not a serious problem. The growth point scenarios also include significant extra housing development in rural Herefordshire and the Market Towns.

For the purposes of this study, we focus on the forecast differences between the base year (2008) and the “growth point scenarios” (2026). This gives the clearest possible picture of the pressures which Hereford’s transport system will have to deal with by 2026, compared with the way things are now. For simplicity we focus on the evening peak, and present a limited number of key metrics. Unless there are large differences between the four growth scenarios, we quote a single, rounded figure. More detail can be gleaned from the forecasting report.

Figure 4.3 shows:

- forecast future year traffic in Hereford for the morning and evening peak hours both without ("do minimum") and with an eastern Relief Road.
- the forecast increase in traffic between 2008 and 2028 as a result of all the planned growth in that period.
- the forecast increase in traffic between 2008 and 2028 as a result of all the planned growth in that period with an eastern Relief Road.

Overall growth in travel: Hereford

Total person trips in study area	2008	2026	change
a.m. peak	29,800	38,000	+ 28%
p.m. peak	32,300	41,000	+ 27%

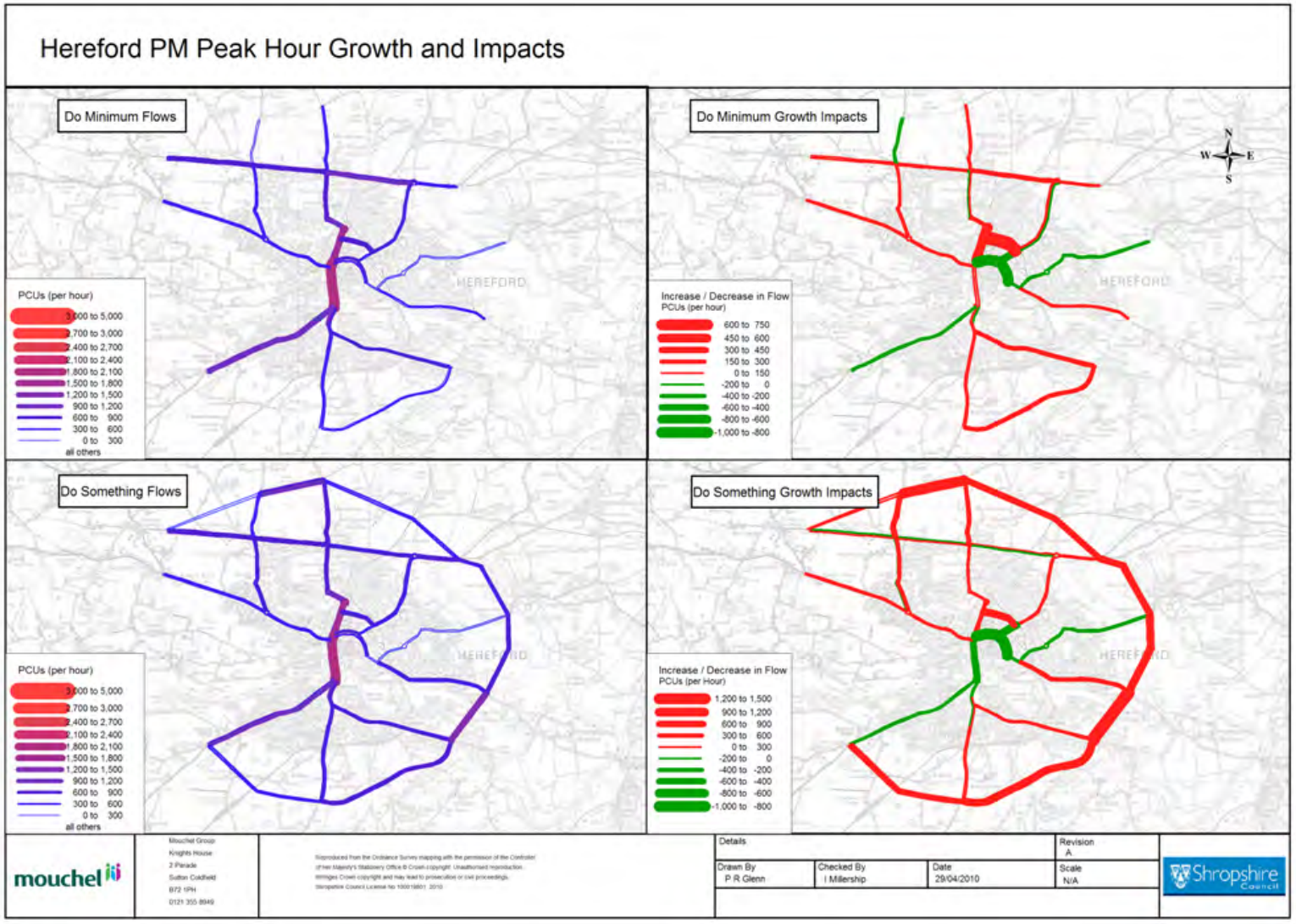

Figure 4-3 Hereford Future Year Evening Growth and Impacts

4.4 Impacts of travel demand

In all three settlements, the effect of planned development over the next 20 years is forecast to be a significant increase in highway traffic. This increase is evident on all parts of the networks, reflecting the distribution of growth between a number of sites around and within each settlement.

It is beyond the scope of this Phase 1 study to replicate the detailed work which has been, and is being, done in each settlement to determine the future impacts of growth and of proposed highways schemes. All the available information is in the respective modelling reports, though the models themselves are subject to ongoing development and improvement.

Some broad conclusions can be drawn however.

In **Telford**, the increases in traffic will generally affect roads which are purpose built and of a high capacity. The main requirement is therefore to ensure that adequate access is provided from areas of new development to the town's distributor roads, although the future traffic forecasts suggest that further mitigation or improvements may be needed to enable the network to "cope" with additional demand. In Telford Town centre, the full expression of the proposed regeneration scheme depends on the down-grading of the box road and this in turn is conditional on the construction of the proposed Greyhound Link

The justification for the Greyhound Link therefore relates to the case for creating a very different type of town centre than that which currently exists. Part of the justification for a new type of town centre, with denser housing development, better walking and cycling links, an improved public realm and car parking located further out is that this could encourage more sustainable patterns of movement, helping to change Telford's long standing dependence upon car use.

A multi-modal modal is being developed to enable for detailed appraisal of the proposed Link and this should be available in time to inform Phase 2 of this study.

In the rest of Telford, where the Greyhound Link will have less impact, it would be wrong to assume that the only imperative is to accommodate vehicular demand. To do would be to perpetuate the relatively unsustainable pattern of transport which has been identified in the first part of this report. What it does mean, however, is that any alternatives to travel by car will have to be made very attractive in order to encourage mode shift, and this means they need to "work" effectively in what will remain a large, relatively dispersed town. The opportunity exists in Telford, more than in the other two settlements, to further develop bus services which can compete with the car over the longer distances involved. New developments provide both an opportunity (to create a critical mass for public transport viability, and to fund new services) and a challenge (to ensure that increasingly scarce road space is allocated in such a way as to assist public transport and cycling).

In **Shrewsbury**, whilst the overall scale of planned growth is less than in Telford (and proportionally less than in Hereford), the forecast growth in traffic will place additional demand on parts of the network which are already (2006) becoming congested. This includes radial routes approaching the town centre, roads within the town centre itself (particularly Smithfield Road), the distributor ring road and the A5 bypass.

The effect of adding a new North West Relief Road (NWRR) would be to provide an alternative route for some of this traffic, releasing capacity for traffic associated with growth. However, even with a NWRR in place, traffic is forecast to increase on most parts of the town's highway network, by comparison with 2006.

This suggests that a NWRR could have an important role to play in creating conditions in which new growth can take place in Shrewsbury, mitigating some of the problems associated with that growth, but that in itself it is unlikely to be sufficient to maintain or improve on the conditions which exist at present. In other words, most of the town's roads will, all else being equal, still be busier than they are now.

In this situation, even with a NWRR, it could remain difficult to create additional capacity for other modes, particularly buses, on the existing road network. Equally however, the very lack of highway capacity makes it important that people are able to access and use modes of transport other than the car. The opportunity exists in Shrewsbury, perhaps more than in the other two settlements, to encourage greater use of cycling and walking, as envisaged in the Cycling Towns Demonstration Project. It may be difficult to improve bus journey times and reliability, except perhaps on routes directly relieved by a NWRR, but there should be scope for improvements to bus frequencies and to the quality of both vehicles and passenger facilities.

In **Hereford**, traffic forecasts suggest that the provision of the Edgar Street Link is likely to have a very significant local impact, providing relief to the existing inner ring road and helping to make the city centre more attractive and accessible, especially to people walking.

Hereford is expected to see significant growth in relation to its size whilst, as we have seen, its roads are already congested at peak times. It is therefore surprising that forecast traffic volumes over the main river bridge do not appear to increase much between 2008 and 2026. After discussion with the Council, and upon closer examination of the model results, it seems likely that the existing future year model may be unable to assign all of the demand for trips between the north and south sides of the town due to an absolute lack of capacity (both in the model and in reality).

It is beyond the scope of this Phase 1 study to determine whether or not the model is realistically predicting trip suppression and/or modal shift and this requires further examination in Phase 2. However we can conclude that the level of growth currently planned for Hereford appears likely, all else being equal, to overload the present capacity of the highway network.

The addition of a Relief Road (we have illustrated an Eastern alignment) is, on the other hand, forecast to lead to a net reduction (compared to 2008) of traffic crossing the existing bridge, as well as relative traffic reductions in the city centre. A large volume of traffic is forecast to transfer to a new bridge, which would effectively link the Rotherwas employment area with the north side of the city. However, the net reduction of 400 vehicles (two way) in the PM peak on the Hereford River Bridge (or an 11% reduction) seems to be an underestimate of the impact of such a key piece of new infrastructure. This appears to be the net impact of trip suppression caused by the current base year levels of congestion on this route. Further work will be available in time for

Phase 2 of this Study to better understand the real impact including the potential contribution that sustainable travel is currently and could potentially have on this key route.

There does therefore appear to be a case to be made for the provision of a second river crossing in Hereford, in order to allow planned growth to take place. As currently envisaged, the Relief (either alignment) involves much than simply providing a new bridge; it would also create a bypass around three sides of the city. It may also be appropriate to consider alternative schemes based on providing a new bridge with a less ambitious Relief Road, for assessment as a "low cost alternative" or as part of a phased delivery.

If it does prove possible to deliver the Relief Road, consideration could be given to "locking in" its benefits by reallocating capacity on the existing A49 bridge, possible providing a dedicated bus/cycle lane. Walking and cycling are the most important sustainable modes of transport in Hereford, and this needs to be reinforced by continuing to develop both the infrastructure and the culture of support for these modes.

The Hereford Relief Road study currently under way will examine in more detail the relationship between the relief road and phasing of development. It will also include a modelled assessment of the contribution which a range of sustainable transport measures will make in accommodating the City's growth in transport demand.

Summary

In each of the three settlements, modelling work has been undertaken by the respective local authorities to determine the likely traffic impacts of planned growth, and this has been used to inform the present study and indicate what further work needs to be done.

In Telford, the proposed Greyhound Link is seen as key to the transformation of the town centre, enabling it to operate more sustainably. Upgrading the existing model to allow mode choice would enable this to be studied explicitly. In Shrewsbury, the interdependencies between the proposed NWRR and planned housing and employment growth need to be made clearer. In Hereford, the future year do minimum forecasts (i.e with growth but no Relief Road) need to be investigated further to gain a clearer picture of the conditions that would prevail if the city were to grow substantially without provision of extra road capacity.

In terms of sustainable modes of travel, the evidence suggests that the potential to increase mode share may be different in each settlement:

	Telford	Shrewsbury	Hereford
Most promising sustainable modes	Bus, Cycling	Cycling, Walking	Walking, Cycling
Less promising sustainable modes	Walking	Bus	Bus

The role of smarter choices and sustainable alternatives to car use is discussed in more detail in the following chapter.

Transport as an inhibitor or generator of opportunities

Transport does not of course exist in isolation, or only in and for itself. The transport measures that may need to be provided to cope with growth in each place may also create opportunities to address wider challenges. Obvious examples are the links to the health and well-being agenda, quality of life, place making and environmental challenges.

Equally, if transport provision is inadequate to cope with the demands of growth, especially if this leads to greater congestion, this could inhibit the scope to address economic and quality of life challenges in each place. If car dependence is allowed to increase as a result of growth, this would be a serious setback to the urgent challenge to address national and global carbon emissions

Chapter 4: Planned growth and development

Summary

- ***Each of the study settlements is designated as a growth point, and together they are set to receive up to 40,000 new homes between 2006 and 2026, as well as additional employment development.***
- ***The percentage housing growth in Telford would be 46%, in Shrewsbury 23% and in Hereford 39%.***
- ***In each place, sufficient work has been done on the distribution of new development to enable its broad impact to be assessed in this study, but work is continuing on detailed site allocations.***
- ***In Telford, the preferred option would include an increased residential density close to the town centre, for which there are ambitious regeneration plans, including partial closure of the town centre "box road"***
- ***In Hereford, there are also well advanced proposals for town centre regeneration: the Edgar Street Grid scheme***
- ***In Shrewsbury, there are proposals to remove the remaining through traffic from the town centre and continue the programme of road space reallocation as part of the Integrated Transport Plan.***
- ***In all three places, there are plans for major road schemes.***
- ***In all three places, traffic models have been used to determine the impacts of the growth point and committed development, and to test the various highways proposals. These models are still being developed, and improved versions should be available for Phase 2 of this study.***

- ***Existing model results have been examined. In all three places, proposed development would, all else being equal, lead to a significant increase in travel demand, and potentially greater congestion.***

- ***Whilst the main purpose of this study is to identify a full range of options for addressing the issues associated with growth, particularly sustainable transport options, the major road improvements cannot be ruled out as part of the solution – for example in Hereford where the single river bridge is a serious constraint.***

Key challenges

- ***The priority challenge for Telford is to use housing growth to re-shape the urban form, to encourage more sustainable travel and avoid further reinforcing its car-based culture.***

- ***The priority challenge for Shrewsbury is to accommodate substantial housing growth whilst further developing characteristics conducive to sustainable travel behaviour. As Shrewsbury grows, there is a danger that it could become more, not less, car dependent.***

- ***The priority challenge for Hereford, with its less developed highway network and single principal river bridge, is to cope with the impacts of the substantial growth proposed whilst further developing the existing characteristics conducive to sustainable travel behaviour.***

Gaps in evidence

Possible gaps in the evidence are:

- ***There is a need, in Phase 2, to examine the emerging land allocations in more detail, for example to quantify the benefits for sustainability of Telford's focus on denser development in the town centre, and to examine further the relationship of allocations in Shrewsbury and Hereford to existing transport networks, and potential improvements.***

- ***There is scope for improvement in the transport models – for example the inclusion of mode choice in the Telford model and further investigation of the way the Hereford model deals with very congested future networks.***

- ***There is scope, in Phase 2, to use these models for to test the options identified in this Phase 1 study – at the moment they are mainly being used to test the major road proposals.***

5 Smarter Transport Choices

This chapter introduces the concept of "smarter choices" as a way of reducing demand for travel and encouraging more sustainable transport choices. Drawing upon current research and the recently published results of the DfT's "Sustainable Travel Towns Demonstration Project", it considers the conditions in which Smarter Choices can be effective, and the appropriateness of this approach in the three study settlements in general terms.

5.1 Reducing the demand for travel

The term "smarter travel" encompasses a family of techniques (also known as 'interventions', 'measures' or 'tools') for influencing travel behaviour towards more sustainable travel options. Key characteristics of these techniques include increased use of public transport, increased walking, increased cycling, reduced single occupancy car use, reduced travel for work, and using technology to help achieve all of the above.

Smarter travel has to be seen in context with the wider philosophy of Transport Demand Management (TDM) which has the potential to be a very powerful tool. As a concept it is mainly applicable to spatial and transport planning, as opposed to the management of transport operations and networks. TDM has a role to play in shaping future environments, not merely managing existing transport situations. Therefore concepts such as smarter travel, smarter choices, mobility management and active travel management all have a part to play within this wider TDM approach which, if mainstreamed and integrated successfully, can play a major role in delivering sustainable travel systems.

The Institute of Highways and Transportation's *Smarter Choices Guide* identifies four main families of interventions:

- Soft measures (e.g. travel plans, car sharing schemes)
- Promotion and awareness raising (e.g. personalised travel planning)
- Sustainable transport infrastructure (e.g. provision for walking and cycling)
- Monitoring and evaluation

In the past, central government guidance has focused on particular interventions, such as employer, school or residential travel plans. More recently there has been a move towards a package approach to smarter choices. It is clear from national studies that it is not possible to attribute a clear modal shift return from any one measure; instead modal shift (from single occupancy car use) depends on various factors including:

- Consistent exposure to smarter travel messages
- Sufficient resources to provide local support and guidance

- Receptivity of the target audience
- Political positioning of smarter travel programmes and the level of priority given to these measures within a local authority
- The willingness of local authorities to lead by example
- The successful and timely blending together of infrastructure measures with appropriate behavioural measures

The development of the Sustainable Travel Towns programme (Peterborough, Darlington and Worcester) coupled with the Cycling DemonstrationTowns programme (including Shrewsbury) and Personalised Travel Planning projects have all pointed to the importance of sustained, interdependent linkages between infrastructure provision and behaviourally based interventions. To inform this study, we have analysed the key issues emerging from this national research.

An appraisal of the DfT's Sustainable Travel Towns demonstration project, with particular reference to the work in Worcester, is given in **Appendix 1**. This considers the likely applicability or otherwise of this approach for our three study settlements, Telford, Shrewsbury and Hereford.

A number of other DfT studies and programmes are relevant to the DaSTS studies, and have fed into our work. A synopsis of some of the most relevant Smarter Choices evaluations, focusing on the factors that affect people's propensity to change their travel behaviour, is included in the Technical Annex to this report.

Whilst smarter travel initiatives can be measured by outputs (e.g. number of travel plans adopted), the most valuable assessment is based on outcomes (i.e. long term behaviour change) and how successful initiatives are in achieving these. For successful outcomes it is important that the smarter travel toolkit is flexible, maintaining the ability to switch between measures according to their effectiveness. Smarter travel can and has made a real difference, particularly where it is blended with other processes such as public transport investment, home to school transport strategies, regeneration, master planning and wider spatial considerations.

The full use of smarter travel tools is particularly important when trying to enable economic and housing growth in the current economic climate, where investment capital for major infrastructure led solutions is not so readily available.

The role of smarter travel in facilitating new housing and employment growth is also supported through the DfT's latest guidance on 'Delivering Travel Plans through the Planning Process' (2009), emphasising the importance of travel plans in major urban extensions, eco-towns and sustainable urban redevelopment schemes.

Case Studies – Smarter choices and development

Four case studies are described below where Smarter Choices opportunities have been pivotal to the development of the planning case for a development site.

Haywards Heath: A "residential travel plan and sustainable transport measures" approach enabled forward occupation prior to the completion of road infrastructure. Capacity was created for 310 housing units plus 80 elderly persons units (of a total 685permitted) by retrofitting the travel plan to the existing urban extension This location was identified to accommodate a significant level of housing growth as part of Mid Sussex' obligations to the Government on housing numbers and was tested robustly at appeal. The Inspector and Secretary of State ruled that the allocated site should go ahead at a higher development capacity than previously outlined in the Local Plan. They concluded that the travel plan approach was sufficiently robust to demonstrate that half the development could be occupied before completion of a Haywards Heath Relief Road.

South Morton: The strategy for delivery of this planning application was based almost exclusively on smarter travel and sustainable transport network improvements and focused on retrofitting wider walking, cycling, DDA and travel planning measures over the south western sector of Carlisle rather than just within the development site. The granting of planning permission on the basis of this approach has set the pace for dealing with the other growth point planning applications in terms of sustainability and smarter travel. Of the £1.6 million S278/S106 package, nearly £1million of investment relates to softer measures, provision of new bus services (including a bus gate), walking and cycling network improvement, modal shift schemes on 2 major radials and comprehensive workplace school and residential travel plans. The bulk of the S278 measures relate to pedestrian and cycling, as well as vehicular access into the site.

***Uckfield*:**This case study, which deals with the proposed development of some 1250 housing units in three locations around a Sussex market town, demonstrates how smarter choices and sustainable travel packages should not be used to make sequentially poor locations acceptable in planning terms, particularly ahead of the LDF process. These sites, again tested at appeal, demonstrated that if inherently the locations have poor connectivity for sustainable modes, housing should not be released ahead of clear sequential testing of the sites at LDF stage.

Poole Quarter:

The early advancement of the residential travel plan approach resulted in increased development density and enhanced 'place making' qualities for this scheme.

Fuller details of these case studies are given in the Technical Annex to this report.

In promoting sustainable growth, particularly within the national Growth Areas and Growth Points strategy, full opportunity should be taken to promote a holistic placemaking approach and to

encourage long term stakeholder engagement when developing smarter travel delivery programmes.

5.2 Sustainable Travel potential in the study settlements

In examining the 'full potential' of smarter choices for each of the study settlements, a number of key questions need to be asked:

Why smarter choices?

In order to accommodate the very high levels of growth planned for each of the study settlements, it is important to understand what opportunity there is to create and manage capacity on the local (and strategic) transport networks through the application of smarter choices techniques.

From both national and local anecdotal evidence, it is clear that a 'pure' smarter choices approach would not be appropriate for any of the growth points. Given the scale of growth predicted for each of the places a balanced package will be needed. Physical network improvements, provision for walking and cycling, enhanced public transport (bus and rail) and demand management measures will all have a role to play within each of these settlements.

However this should not prevent any of the study settlements from adopting a ''sustainable transport first' approach to tackling development challenges. The need to maximise the potential of existing infrastructure, coupled with ever-tightening budgets around Section 106 contributions, affordability and viability, means that they need to look for affordable ways to deliver new growth without further compromising the operational integrity of existing transport networks.

The DfT's Guidance on Transport Assessment and Travel Plans (2007) and Circular 02/07 on Planning and the Strategic Road Network, encourage examination of sustainable transport solutions first, with the objective of *'nil detriment'*. This gives the opportunity for smarter travel solutions to come into their own through the development of integrated travel solutions, wide area travel planning and innovative approaches to sustainable travel.

What evidence is there for the effectiveness of Smarter Choices?

As part of this study, a comprehensive evaluation of smarter travel potential has been carried out assessing both national best practice and the potential for local success. This evaluation is set out in the Technical Annex to this report. These evaluations will be important in refining a pro-sustainable travel package for each of the 3 towns, and will act as key reference point for work carried out in Phase 2 of this study.

We have examined available outputs from the Sustainable Travel Towns programme in Worcester, Peterborough and Darlington. The programme cost £15 million over the five years from 2004 – 2009. Overall, it demonstrated that significant changes in demand can be achieved through the systematic and determined application of appropriate "Smarter Choices" measures, including travel awareness campaigns, support for walking and cycling, public transport marketing and workplace and school travel plans. Overall, after 4 years, it is reported that car driver trips reduced by 9%, car distance driven by 5% – 7% overall compared with similar towns, bus use

increased by 10% – 22%, especially in Worcester and Peterborough, and cycling increased by 26% to 30%, walking by 13%. All of these statistics "buck the trend" observable in towns of similar size and character. Significantly, all three towns demonstrated social characteristics that suggested they were "ready for change" with a pre-existing commitment to smarter choices in some shape or form. Whilst these early results still need to be examined in detail (and over time to see if the effects wear off), they provide a clear indication that "soft" measures can have significant, area wide effects. As such, it is appropriate to consider whether such measures could work in the three settlements in this DaSTS study.

How fertile is the ground for smarter Choices?

A key part of the research involved detailed analysis of a number of local sources relating to smarter travel. This assessment was carried out in each of the study settlements to ensure that we understood the level of success of travel plans, and other key tools to deliver modal change. The objective here was to understand how valid these tools were in a local context.

The exercise helps us to understand the current legacy in terms of smarter choices and how 'ripe' the town is for significant behavioural change through a 'softer' measures toolbox. The detailed documentary evidence and analysis is presented in the Technical Annex and covers:

- Evaluation of uptake of workplace travel plans secured either through planning permission or through voluntary commitment. Again this was designed to assess the 'temperature' of local businesses to these types of smarter choices interventions in the future.
- Evaluation of a sample number of workplace travel plans in terms of quality and level of commitment
- Evaluation of residential travel plans secured through the planning process.
- Evaluation of school travel plans - a useful 'barometer' of travel planning success based on the 100% coverage of schools through PLASC school census data and the presence of many travel plans.
- Evaluation of a sample number of primary and secondary school travel plans to understand their longer-term commitment to the travel planning process and the quality of the travel plan documents themselves, particularly relating to mode shift targets, monitoring and action planning.
- Assessment of the 'core' publicity and information produced by the local authority or in partnership (e.g. cycling maps etc).

This was complemented by 'smarter choices health checks' carried out through interviews with sustainable travel officers in each of the three authorities. These are included, for each settlement, in Appendix 6.

From these assessments we are able to draw the following conclusions for each town:

Telford

Telford demonstrates a good variety of travel plan applications across a wide range of land uses.

The schools sector is particularly strong, with very comprehensive and robust travel plans in place, The sample school travel plans we evaluated demonstrate all the features of a sound operational school travel plan and demonstrate active commitment.

The FE/HE sector was also assessed, with a major college demonstrating good understanding of the importance of SMART targets and ongoing monitoring. The proposed package was also balanced in terms of the different audiences it was designed to reach.

The office sector included voluntary travel plans which again were simple yet effective although regular monitoring was still a potential weakness here.

Retailers were also involved in the development of travel plans but these tended to be a customisation of a standard corporate template approach; again survey data and target setting required addressing in more detail but the mix of measures suggested were relevant.

A mixed use travel plan for the Lightmoor Village offered a particular opportunity to shape the travel behaviour of future employees and residents, and was driven through the planning process. There is a major opportunity to demonstrate best practice in this model, particularly with the supporting guidance from the DfT/CLG on travel plans now refreshed, and an increased emphasis from the Homes and Communities Agency on sustainable transport solutions.

Telford has also looked at tourism and leisure travel plans (including Ironbridge Gorge) and has developed a travel plan to deal with increased visitor throughput.

Finally, the Council fully recognises its key role in developing its own corporate travel plan and has recently been advancing father surveys etc. There is potential for the Council to set more aggressive modal shift targets which in turn may have a ‘ripple effect’ on other organisations.

Overall, Telford is ‘ready’ to take smarter travel solutions to the next level, with the introduction of area wide travel planning and other tools to encourage business engagement. The schools sector remains strong, but the next challenge is to look at the employment and town centre regeneration opportunities as a key lever for smarter choices investment. The Lightmoor Village development provides a particular opportunity for smarter travel initiatives to be embedded early.

Shrewsbury

Shrewsbury was able to provide a good range of travel plan examples, particularly in the education sector. Both engagement and monitoring and particularly strong, with a good balance of ‘hard’ and ‘soft’ measures used to achieve modal shift.

Most schools have moved forward on their commitments and acting plans demonstrating local ownership and embedding of travel plan practices. Many of the solutions are bespoke and thought through at a local level which demonstrates the diverse ways in which mode shift can be achieved. Within the sample only a couple of schools had not progressed significantly.

In Shrewsbury we were able to assess travel plans for leisure and sport/event venues such as Sundorne Sports Village and the football ground. In both cases whilst framework/intention was in place, more robust travel planning, surveys and SMART measures are needed, pointing towards a real opportunity to develop smarter travel options in this sector.

A similar picture was demonstrated though hotel travel plans which again were required through the planning process but did provide the level of SMART evidence normally expected. Office based travel plan secured through the planning process performed slightly better in terms of information quality but again focused on baseline rather than successive data collection to identify trends and measures which were working well. Finally retail-based planning applications painted a similar picture in terms of intention but lack of implementation.

The evidence shows that there is significant potential for travel plans to have a lasting impact, if reinforced by strong local guidance and supported by the Local Development Framework. The schools sector is quite robust, but voluntary and 'for planning' travel plans for other sectors need to be strengthened. The Council's own travel plan needs to be moved forward positively to encourage the business community to follow its example.

Overall, whist the Council, schools and selected employers (e.g. PCT) are 'ready' to move forward with a pro-sustainable transport strategy there is still a need for other organisations to be 'brought up to speed' and for cultural acceptance of some of the latest thinking on sustainable transport. Further development of the Cycling Town approach to achieve this may well be successful, as it provides a very visible way of communicating the importance of sustainable travel.

Hereford

From evaluation of sample school travel plans it is clear that the schools are taking travel planning seriously and are treating them as 'living' projects. The action planning process is SMART and look at a variety of measures. Commitment in terms of school engagement and community support also appears strong.

The Council also places importance on its own travel plan and on 'leading by example'. The travel plan appears to be successfully mainstreamed into Council operations and mode shift targets have been exceeded, Keeping up the momentum in this area will assist in effective planning negotiations, development of SPD guidance on smarter choices and give further credibility to the emphasis on smarter travel.

The Rotherwas Industrial Estate area-wide travel plan is the most comprehensive in Herefordshire and sets a good example for the other growth towns. The travel plan itself is comprehensive and the Council have ensured that monitoring has taken place since 2000, together with provision on an on-site coordinator in more recent years. This model is capable of further development and points to the level of perseverance and engagement needed with employers to develop a self-sustaining travel plan model.

Overall, Hereford has the capacity to build very strongly on its travel plan legacy particularly focusing on the area wide approach and the schools sector. Use of the area wide approach to support the Eign Gate redevelopment and the wider city centre to cater to tourism/leisure, social and service/retail trips should also be considered.

Shrewsbury and **Hereford** are relatively tightly constrained towns, with the potential for active travel to form a key part of the transport solutions, whereas **Telford's** form is more dispersed, and would rely more on access to sub-centres (Wellington, Oakengates) and connectivity with the bus network. However given the employment locations within Telford, there is a strong scope for town centre and industrial estate zonal travel plans to form a key part of its strategy.

On the evidence presented, none of the study settlements has any “show-stoppers” towards to the development of smarter choices; however in terms of maturity of solutions and public acceptance of smarter choices Hereford has demonstrated the most ‘fertility’ in this area, followed closely by Shrewsbury and Telford.

All of the settlements have the potential to enhance smarter choices. The key issue is whether a smarter choices culture can be engrained more solidly within the existing populations prior to delivery of planned growth so that any development sites that are ‘plugged’ into the existing cycling, walking and public transport networks (with their own smarter choices solutions) will complement current behaviour. If cultural change cannot be achieved over the next 5 years ready to accommodate this additional growth, then there will be little scope to achieve radical change and meet the aggressive carbon targets facing Government by this means.

On this basis, smarter choices measures must be carefully limited and targeted to those trip purposes and target audiences that will be most receptive within these communities, and the temptation avoided to provide ‘overload’ of choices that will not generate critical mass and cannot be sustained

A prerequisite to successful implementation of smarter travel through the planning process will be the embedding of the DfT’s travel planning guidance within the Core Strategy, Area Action Plans, and within Supplementary planning Documents; linked to Section 106 or Community Infrastructure Levy (CIL) mechanisms.

What is the potential for the development sector to fund and provide smarter choices solutions?

In order to accommodate growth there is scope for all three settlements to apply “trip banking” methods to enable housing and employment development. Whilst it is accepted that some developments can never be wholly ‘trip neutral’, there is nevertheless a major opportunity to facilitate development through the use of smarter travel solutions.

Trip banking

The broad concept of trip banking is

- *'to introduce wide area measures and smarter travel initiatives that enable a reduction in existing traffic levels, which is then 'credited' back to the development proposal, compensating in full or in part for the predicted impact of development traffic*'

The approach can be applied to person trips, and pressurised public transport or pedestrian networks, as opposed to just vehicle trips. The industry uses terms such as 'trip banking', 'trip crediting', trip offsetting' and 'headroom creation' to describe this process. To give some refinement to this, the following definitions help explain the concepts:

Trip Banking implies 'saving up' trip credits ahead of the submission of a new planning application. This can be carried out discretely (i.e. banking trips from a voluntary travel plan applied to earlier phases of a residential scheme ahead of further planned phases affecting the same masterplan area) or more widely (i.e. by creating an area wide travel plan with global targets, which if met can lead to trip offsetting by individual developers as they come forward with their applications). Note that the 'headroom' concept has to be applied on its own merits in each individual case. There will be instances where the 'headroom' argument enables development without costly up-front investment but there are also instances in policy and timing terms where the softer solution cannot and should not be manipulated to enable early occupations. Examples from recent public inquiries at Haywards Heath and Uckfield in East Sussex are included as case studies in this report.

The concept of trip banking is so much more than just making the maths of the TA work, it is about adopting an approach that will allow developments to be more creatively designed to be built at an effective pedestrian scale, and actively contribute towards enhanced employment and housing provision through a strong 'placemaking' ethos. The link between sustainable transport, travel planning and the creation of better quality environments where people can live and work is essential if we are to create 21st Century neighbourhoods that have a true identify and sense of belonging.

5.3 Travel plans and the planning process

The advent of the DfT's new Guidance: *Travel Plans and the Planning Process* (DfT/DCLG 2009) is also critical in the success of the trip banking approach. In order for any wider area smarter travel strategy to be successful (including both 'hard' and 'soft' measures working together) requires clear commitments to delivery via a Section 106 legal obligation route.

However, for new development to be assigned 'trip credits' it is important that the capacity for existing residents and employees to change behaviour is properly predicted and monitored against targets. This can be achieved through a forward development programme of wide area travel planning ahead of the planning allocation and application process, and looks in more detail at the propensity for behavioural change in corridor specific or neighbourhood specific locations. This assessment process will also help guide, sequentially, which LDF allocations should be released first, minimising the amount of heavy infrastructure needed and relying much more on pedestrian, cycle and public transport connectivity

5.4 Application of smarter choices to the study settlements

Given the scale of growth proposed in each of the study settlements (Table 4.2 in the main report) it is clear that the 'retrofit' smarter choices model on its own would not be sufficient to accommodate the growth forecast over the RSS and DaSTS period.

Ranging from a 23% increase in households in Shrewsbury through to a 39% increase in Hereford and a 46% increase in Telford, the capacity for the existing population to change mode and create spare capacity on the network will be limited in each case to a 'natural' level for each town. This is why it has been so critical to identify the level of 'commitment' to smarter choices in each town, its culture, and how ripe and ready the town is to embrace smarter choices on a larger scale.

Following the logic of both the Haywards Heath and Uckfield examples, there will come a point in the development of each settlement when, even if the maximum mode shift away from car has been achieved by targeting the existing population, other infrastructure or demand management measures will be needed.

Hereford presents the most acute problem in this respect, with its single bridging point over the Wye. Nevertheless, as the bulk of traffic using this route has local origins and destinations there will be scope for smarter travel to absorb some of the existing demand. Indeed, diagnosis of existing smarter choices, walking, cycling and public transport activity indicates that there is 'mode shift potential' in place in all three study settlements to create "headroom" for new development by the area wide application of smarter choices measures.

In terms of trip abstractions, this is more likely to be successful in towns where the main employment locations, and retail provision, are clustered together, and where school travel planning is effective (accounting nationally for on average 20% of all trips in the termtime morning peak period).

Following the Uckfield model, Shrewsbury has the biggest potential to achieve a healthy level of trip credits ahead of new development given the current housing levels of nearly 28,000 homes compared to an absolute growth volume of 6,500 homes.

Hereford is ranked second in terms of potential, based on the 22,000 current household numbers, which could increase by 8,500.

The biggest challenge is in Telford, on account of the comparatively dispersed form of the town, coupled with a planned 46% growth in the number of homes.

Phase 2 of this study will quantify, as far as possible, the level of trip reductions which could be achieved through smarter choices interventions, including trip banking to enable development to occur in advance of other interventions.

Chapter 5: Smarter Transport Choices

Summary

- ***"Smarter Choices" describes a family of measures for influencing travel behaviour towards more sustainable travel options***
- ***Use of smarter choices is increasing as a tool in spatial and transport planning.***
- ***There is an increasing body of evidence to show that quantifiable benefits can be achieved using smarter choices methods, particularly the recent Sustainable Travel Towns demonstration project.***
- ***Smarter choices measures, such as personalised travel planning, work best when there is strong local authority support, and where alternative, more sustainable modes of transport are available***
- ***Travel planning guidance should be embedded within Core Strategies, Area Action Plans and SPDs, and linked to Section 106 and CIL mechanisms***
- ***A "Smarter Choices health check" undertaken for each study settlement.***
- ***None of the settlements has any "show stoppers" but in terms of maturity of solutions and public acceptance of smarter choices, Hereford offers the most fertile ground, followed closely by Shrewsbury and Telford.***

Gaps in evidence

Possible gaps in the evidence are:

- ***Need for detailed longer term monitoring of the effectiveness of measures such as personalised travel planning where applied in each place***
- ***Need to quantify in Phase 2, as far as possible, the level of trip reductions which could be achieved through smarter choices interventions, including trip banking to enable development to occur in advance of other interventions.***

6 Potential interventions

This chapter describes the wide range of generic interventions identified as a basis for the in-depth analysis of options for the study settlements. Set out systematically, the list includes conventional transport interventions covering all modes of travel, as well as possible non-transport and "soft" measures.

This list, together with our analysis of the existing characteristics of each settlement, provides the foundation for the option generation process which is described in subsequent chapters of this report.

6.1 Long list of interventions

A comprehensive "long list" of possible generic interventions has been identified and agreed with study stakeholders as a basis for the appraisal of possible options for each of the three settlements. These cover the themes of:

	The 17 Intervention 'Themes'
	Strategic governance, legislative and fiscal measures
	Spatial planning policy and sustainable land use planning
	Vehicle Technology Developments
	Strategic Smarter Choices/Travel Behaviour Measures
	Travel Plans
	Promotion and Marketing
	Walking/DDA Access
	Cycling
	Public Transport Innovation and Quality - Bus
	Public Transport Innovation and Quality - Rail
	Public Transport - Park and Ride
	Intelligent Transport Systems and Capacity Management
	Parking Strategies and Management Tools
	Freight Management
	Water Transport
	Highways Infrastructure and Network Capacity Enhancement*
	Management, Monitoring and Measurement

A large number of generic interventions has been identified under each of the above themes and these are listed and described in Appendix 3

The purpose behind this “exhaustive” approach is to ensure that all possible types of intervention are considered for each of the study settlements – including ideas that might not have been explicitly considered before, or which are “taken for granted”. We believe this encourages fresh thought from “outside the box”, adding real value to the study.

Each intervention was then scored in a workshop that included representatives of each settlement, with inputs from regional stakeholders, using a specially adapted appraisal tool. All workshop participants were cognisant of the findings of the baseline study and best practice examples, so this could influence the scoring. Scoring has been undertaken against the criteria based closely on those in the DfT’s strategic appraisal tool, although the DfT tool itself is considered more appropriate for Phase 2. As part of this exercise each intervention was also scored according to the DfT’s five DaSTS goals.

The appraisal tool and option evaluation process is described in detail in Appendix 4.

The results of the evaluation are described in Chapter 7 and set out in detail in Appendices 5a, 5b and 5c for each of the three study settlements.

Chapter 6: Potential interventions

Summary

An exhaustive and detailed list of potential generic interventions, grouped systematically into 17 categories, has been created. This ensures that every possible type of intervention will have been considered for each of the study settlements – making it possible for wide ranging and different packages to emerge from the analysis

Gaps in evidence

Possible gaps in the evidence are:

- ***There is a need, in Phase 2 of this study to quantify, as far as possible, the contribution which different types of intervention could make to reducing the demand for travel and encouraging use of more sustainable modes, using the evidence now becoming available on this.***

7 Option Evaluation

This chapter describes how the potential interventions (described in the previous chapter) have been prioritised for each of the study settlements to give a profile of interventions for each place. This profile represents the types of measures likely to be most effective in addressing the issues of growth in a sustainable way.

The prioritisation process takes account of the intelligence gathered about each settlement in this study, the views of informed stakeholders and the extent to which each measure could address the challenges and contribute to achieving the five DaSTS goals.

7.1 Option Evaluation Process

Each of the generic interventions, identified in Chapter 6 and described in detail in Appendix 3) was then evaluated and "scored" in a workshop that included representatives of each settlement, with inputs from regional stakeholders using a specially adapted appraisal tool. All workshop participants were cognisant of the findings of the baseline study and best practice examples, so this could influence the scoring. Scoring has been undertaken against the criteria based closely on those in the DfT's strategic appraisal tool, although the tool itself is considered more appropriate for Phase 2. As part of this exercise each intervention was also scored according to the DfT's five DaSTS goals.

The appraisal tool and option evaluation process is described in detail in Appendix 4, and the full results of this scoring process are set out in Appendices 5a, 5b and 5c for each of the three study settlements.

The scoring process was made as objective as possible, by describing the interventions and framing the criteria as precisely as possible. The scoring reflected the workshop participants detailed knowledge of the towns and a thourough understanding of the baseline information gathered in the first part of this study. This is a very important aspect of the process, linking the different elements of the Phase 1 study (refer to the study flowchart in Chapter 1).

7.2 Interpreting the results

The final scores have been grouped into three categories: Red, Amber and Green, giving a clear visual indication of the extent to which each type of intervention is likely to have a significant role in a future package. Those scored "green" are those which are most promising, whereas "red" indicates a type of intervention which is unlikely to play a significant role.

It is important to not to attach too much significance to the exact numeric scores for each intervention – rather, they should be taken as a broad indication of whether the generic intervention should be taken forward for more detailed consideration in Phase 2.

7.3 Results of option evaluation

The summary key results of the evaluation are set out below:

Tables 7-1, 7-2 and 7.3 show, for each study settlement, all of the generic interventions which scored “green” in the evaluation process. The potential interventions are grouped by category, and then in alphabetical order (for the reasons given in 7.2 above). However the “Top 30” generic interventions for each settlement are highlighted, as these highlight better some of the differences between the approached likely to succeed in each place.

A more detailed summary is set out in Appendix 5d. This shows the results for all the potential generic interventions, coded red/amber/green as described in 7.4 above, and includes “minor” interventions which are not covered in Tables 7-1, 7-2 and 7-3.

The results are discussed further in Chapter 8 below.

Table 7-1 DaSTS Phase 1 RAG Results Telford

DaSTS Stage 1 RAG results Telford		
Family	**Intervention Description**	**Top 30**
Cycle	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling - longer term potential - sustainable	♦
	Cycle route map	♦
	Cycle route network improvement - including lighting/crossings and routes provided/improved to appropriate Bikeability standards / Safer Routes	♦
	Innovative signage (e.g. cycle responsive 'Think Bike')	
Highways Infrastructure and Network Capacity Enhancement	Improved access to strategic road network (new junctions etc)	♦
	New bus only and or Ped / cycle bridges	♦
	New part/ full ring road (inner)	
	New part/ full ring road (outer)	
	Strategic signalisation / ITS / UTMC	
	Strategic links to facilitate and access new development	♦
	Traffic platooning tools for key radials	
Intelligent Transport Systems	Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight	♦
	Bus, cycle & HOV lanes	♦
	Car Parking- Intelligent signing and waymaking to reduce unnecessary circulation in the town centre system and to encourage filtration off at P and R sites.	
	Real Time Passenger Information	♦
Park and Ride	Park and ride central to locations (i.e. Town centre)	
Parking Strategies	Improved car parking signage and advance via VMS systems (inc strategic road network)	
Promotion & Marketing	Area wide health promotion interventions including wellbeing, obesity and air quality issues	♦
	Business carbon assessment	
	Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Liftshare Day, branding etc	♦
	Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information	♦
Public Transport Innovation and Quality- Bus Measures	Bus priority schemes including corridor and location measures (bus gates)	♦
	Bus stations- new / improved	
	Bus rail integration e.g. physical interchange improvements, improved routing, better connections timings	♦
	Improving accessibility to key locations by bus	♦
	Providing / improving bus waiting facilities	
	Real-time bus information	
	Recast bus network- Introduce cross town bus services and higher frequencies	♦
Rail Measures	Promotion of new / adjusted services	
	Rail station travel plan	♦
	Rail station upgrades and customer waiting improvement	

Spatial Planning	Area action plans include sustainable travel interventions e.g. requirement for core sustainable transport infrastructure and area wide travel plans.	
	CIL/interventions and Funding strategies - e.g. flexible Capital and Revenue Funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value	♦
	Development Control Guidance / Policy for Smarter Choices e.g. locally relevant Supplementary Planning Document to reflect DfT Travel Plans and the Planning Process Guidance 2009	♦
Strategic Governance	Vehicle emissions standards and roadside testing- using local mechanisms and fines to deter use of high emissions vehicles on key corridors and/ or town centre	
Strategic Smarter Choices	Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc	♦
	Corridor Smarter Choices Tools - clustering smarter travel interventions along a given corridor (covering residential, school, workplace, cycle promotion etc)	♦
	Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments	♦
	Sustainable Travel Town 'blanket' approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes	♦
	Wide Area Travel Plans e.g. mixed use, commercial and industry / business park travel plans	♦
Travel Plans	Business Stakeholder Engagement / Advice / Travel Plan 'Forums' / 'Transport Management Associations' & Business Improvement Zones - all providing longer term management of travel plans - secured via planning process	♦
	Developing / promoting a car sharing scheme inc. emergency lift home for car sharers	♦
	Planning-led travel plans including enforcement regime	♦
	Rail station travel plans	
	Residential Travel Plans	♦
	Schools and Colleges Travel Plans	♦
	Workplace / Hospitals / Universities / HE Sector travel plans	
Walking and DDA Access	Local traffic management/ estates layouts that encourage active travel through directness and connectivity	
	Improving pedestrian routes and connections - e.g. lighting, DDA, crossing points etc	♦
	Walking buses for schools	

Table 7-2 DaSTS Phase 1 RAG Results Shrewsbury

DaSTS Stage 1 RAG Results Shrewsbury		
Family	**Intervention Description**	**Top 30**
Cycle	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling - longer term potential - sustainable	♦
	Cycle route map	♦
	Cycle route network improvement - including lighting / crossings and routes provided/improved to appropriate Bikeability standards / Safer Routes	♦
	Innovative signage (e.g. Cycle responsive 'Think Bike')	
Highways Infrastructure and Network Capacity Enforcement	Improved access to strategic road network (new junctions etc)	♦
	New bus only and or Ped / cycle bridges	
	New part / full ring road (outer)	♦
	Strategic pinchpoint / network bottleneck schemes	
	Strategic signalisation / ITS / UTMC system	
	Strategic links to facilitate and access new development	♦
	Traffic platooning tools for key radials	♦
Intelligent Transport Systems	Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight	♦
	Area Traffic Management (Zone bases)	
	Car Parking - intelligent signing and waymarking to reduce unnecessary circulation in the town centre system and to encourage filtration off at P and R sites	♦
Park and Ride	Park and ride to central locations (i.e. town centre)	♦
	Providing improved journey times from park and ride to town centre	
Parking Strategies	De-criminalised parking enforcement	
	Improved car parking signage and advance VMS systems (inc strategic road network)	
	Workplace parking levy	
Promotion & Marketing	Area wide health promotion interventions including well being, obesity and air quality issues	
	Green branding to match culture of town/ Lifestyle marketing e.g. targeted at residents who value historic/conservation aspects of the town.	
	Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Liftshare Day, branding etc	♦
	Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information	♦
Public Transport Innovation and Quality Bus Measures	Bus stations- new/improved	♦
	Improving accessibility to key locations by bus	♦
	Providing / improving bus waiting facilities	
	Real-time bus information	
	Recast bus network- Introduce cross town bus services and higher frequencies	
Rail Measures	New rail station to meet local demand and projected growth	♦
	Rail station travel plan	♦
Spatial Planning	Area Action Plans include sustainable travel interventions e.g. requirement for core sustainable transport infrastructure and area wide travel plans	♦
	CIL/interventions and Funding strategies - e.g. flexible Capital and Revenue Funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value	♦
	Development Control Guidance / Policy for Smarter Choices e.g. locally relevant Supplementary Planning Document to reflect DfT Travel Plans and the Planning Process Guidance 2009	♦
	Flexibility in implementation of parking standards of smarter travel package is strong e.g. allowing a reduction in the number of spaces provided (no-car or low-car ratios)	

Strategic Governance	Vehicle emission standards and roadside testing- using local control mechanisms and fines to deter use of high emissions vehicles on key corridors and / or in town centres	
Strategic Smarter Choices	Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc	♦
	Corridor smarter choices tool- cluster smarter travel interventions along a given corridor (covering residential, school, workplace, cycle promotion etc)	
	Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments	♦
	Sustainable Travel Town 'blanket' approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes	♦
	Wide Area Travel Plans e.g. mixed use, commercial and industry/business park travel plans	♦
Travel Plans	Business Stakeholder Engagement / Advice / Travel Plan 'Forums' / 'Transport Management Associations' & Business Improvement Zones - all providing longer term management of travel plans - secured via planning process	♦
	Developing / promoting a car sharing scheme inc emergency lift home for car sharers	♦
	Planning-led travel plans including enforcement regime	♦
	Rail station travel plans	
	Retail / tourism / sports / concert attractors Travel Plans	
	Residential Travel Plans	♦
	Schools and Colleges Travel Plans	♦
	Workplace / Hospitals / Universities / HE Sector travel plans	
Walking and DDA Access	Aggressive use of Manual for Street user hierarchy to make streets more pedestrian friendly including play streets, school zones, quiet lanes, woonerven / home zones, shared space etc	
	Green infrastructure links / short cuts (covering Footpaths / Bridleways / PROW / RUPPs / permissive routes / desire lines / alleys investment	
	Improving pedestrian routes and connections - e.g. lighting, DDA, crossing points etc	♦
	Local traffic management / estate layouts that encourage active travel through directness and connectivity	♦
	Walking buses for schools	♦

Table 7-3 DaSTS Phase 1 RAG results Hereford

DASTS Stage 1 RAG results Hereford		
Family	**Intervention Description**	**Top 30**
Cycle	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling - longer term potential - sustainable	♦
	Cycle route map	♦
	Cycle route network improvement - including lighting/crossings and routes provided/improved to appropriate Bikeability standards / Safer Routes	♦
	Innovative signage (e.g. cycle responsive 'Think Bike')	♦
Freight Management	Consolidation centres to support town centre deliveries	
	Lorry route or Area wide bans	
	No-entry or restricted entry areas (e.g. pedestrianisation)	
	Sustainable freight initiatives/logistics demonstration projects	
Highways infrastructure and network capacity enhancement	Improved access to strategic road network (new junctions etc)	
	New part / full ring road (inner)	
	New part / full ring road (outer)	♦
	New bus only and or Ped / cycle bridges	♦
	Strategic links to facilitate and access new development	♦
	Strategic Pinchpoint/network bottleneck schemes	♦
	Strategic signalisation / ITS / UTMC system	♦
	Traffic platooning tools for key radials	
Intelligent transport systems	Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight	♦
	Area traffic management (zone bases)	
	Bus, cycle & HOV lanes	♦
	Car Parking- intelligent signing and waymaking to reduce unessasary circulation in town centre system and to encourage filtration at park and ride sites.	
	Real Time Passenger Information	♦
	Traffic reduction by vehicle type, weight and size	
Park and Ride	Improved car parking signage and advance VMS systems (inc strategic road network)	
	Park and ride to central locations (i.e. town centre)	♦
	Parking priority/charges related to type, weight or emissions standards of vehicle	
Promotion & Marketing	Area wide health promotion interventions including wellbeing, obesity and air quality issues	♦
	Business carbon assessment	♦
	Green Branding to match culture of town / Lifestyle marketing e.g. targeted at residents who value historic/conservation aspects of the town	♦
	Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Lift share Day, branding etc	♦
	Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information	♦
Public Transport Innovation and Quality- Bus Measures	Improving accessibility to key locations by bus	
	Providing/ improving bus waiting facilities	
	Real-time bus information	
Rail Measures	Rail station travel plan	
Spatial Planning	CIL/interventions and Funding strategies - e.g. flexible Capital and Revenue Funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value	♦
	Development Control Guidance/Policy for Smarter Choices e.g. locally relevant Supplementary Planning Document to reflect DfT Travel Plans and the Planning Process Guidance 2009	♦

Strategic Smarter Choices	Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc	♦
	Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments	♦
	Sustainable Travel Town 'blanket' approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes	♦
	Wide Area Travel Plans e.g. mixed use, commercial and industry/business park travel plans	♦
Travel Plans	Business Stakeholder Engagement / Advice / Travel Plan 'Forums' / 'Transport Management Associations' & Business Improvement Zones - all providing longer term management of travel plans - secured via planning process	♦
	Developing/promoting a car sharing scheme inc emergency lift home for car sharers	♦
	Planning-led travel plans including enforcement regime	♦
	Residential Travel Plans	♦
	Schools and Colleges Travel Plans	♦
Walking and DDA Access	Aggressive use of Manual for Streets user hierarchy to make streets more pedestrian friendly including play streets, school zones, quiet lanes, woonerven/home zones, shared space etc	
	Green infrastructure links / short cuts (covering Footpaths / Bridleways / PROW / RUPPs / permissive routes / desire lines / ally investments.	
	Improving pedestrian routes and connections - e.g. lighting, DDA, crossing points etc	♦
	Local traffic management/ estates layout that encourage active travel through directness and connectivity.	
	Walking buses for schools	♦

Chapter 7: Option generation

Summary

- ***The full range of possible interventions has been considered for each of the three study settlements. These have been prioritised using an appraisal tool developed to take account of the information gathered on the unique characteristics of each town, and the challenges that have been identified.***
- ***The results, presented as a red - amber – green analysis, show that some families of interventions are more likely to be appropriate than others in the study settlements. Those with highest potential include Spatial Planning Policies, Strategic Smarter Choices, Travel Plans and marketing.***
- ***Some differences between the places studied emerge from this analysis. For example, measures related to public transport tended to score higher in Telford, and lower in Hereford. Rail-related measures emerge more strongly in Shrewsbury and Telford, whereas measures related to walking scored more highly in Shrewsbury and in particular Hereford.***
- ***The measures which scored highest – i.e. those scored as "green" - have been listed for each of the study settlements, and the "top 30" have been highlighted.***

- ***These lists of generic interventions are intended to be the precursor to the development and testing of more specific packages of measures for each place, in Phase 2 of this study.***

Gaps in evidence

- ***A key task for Phase 2 will be to develop more specific packages of measures for each of the study settlements, based on the prioritised list of generic interventions, and on the examples of best practice identified in Phase 1.***
- ***There is a need, in Phase 2, to estimate the contribution each package could make to reducing carbon emissions.***

8 Summary and conclusions from Phase 1

This chapter summarises the key findings of the Phase 1 study. As well as drawing conclusions in relation to Telford, Shrewsbury and Hereford, it also considers lessons which may be applicable to other similar places, or places facing similar issues.

8.1 Background to the study

The government report: "Delivering a Sustainable Transport System" addresses the key transport challenges raised by the influential Stern and Eddington reports: to reduce carbon emissions and to support economic recovery and growth. This study arises from the West Midlands Region's response to DaSTS and reflects key regional challenges:

- WM4: Addressing the demand for travel resulting from new development, both employment and housing;
- WM7: Reducing the need for travel;
- WM8: Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel.

Telford, Shrewsbury and Hereford, are typical of many towns and small cities in the UK, though each has its unique characteristics, as this study has shown. Like many similar places, these settlements have been identified as a key locations for inward investment and as Growth Points, set to receive significant levels of housing and employment development over the next 20 years.

The aim of this study has been to help determine how these places, and places like them, can have more homes and more jobs, whilst also having more sustainable, more affordable transport systems. Whilst it considers all modes of transport, and a full range of possible types of solution, it pays particular attention to the potential for reducing the demand for travel, and encouraging use of sustainable modes, through the application of what has become known as "Smarter Choices".

8.2 Typography of place – physical and socio-economic characteristics

A careful examination of the physical and socio-economic characteristics of each settlement (Chapter 2) reveals three quite different types of place, and this needs to be taken into account determining how each should rise to meet the national and regional transport challenges associated with growth.

Telford, the largest of the three places studied is an important centre for manufacturing industry, with larger and more varied employment base than the other two settlements. As a planned new town, it was designed around car transport, with a dispersed, polycentric layout. Its transport network reflects the raison d'être of the town itself. From the construction of the M54 to the development of a free flowing network of distributor roads, Telford has been designed to keep things moving – to get people to work, materials to factories and products to markets. Telford has higher levels of multiple car ownership that the other settlements, but it also has more areas of deprivation.

Plans are being developed for a major regeneration of Telford town centre, and these involve major changes to the road network in the central area, intended to facilitate a denser form of development and easier access by sustainable modes.

Shrewsbury is an historic town, with a much smaller manufacturing base – the main employment sector is public administration, education and health (41%). It's defining characteristic is the containment of the town centre within an almost complete natural loop of the River Severn, with limited points of access and a largely unaltered mediaeval street pattern. As Shrewsbury has grown, its traditional radial transport network has been overlain by a semi-orbital pattern of distributor roads and bypasses, together with improved pedestrian and cycle networks and park and ride, which presently help keep things moving in the outer areas whilst ensuring access to the historic centre by all modes. However, there is congestion in the sector of the town which has neither ring road nor bypass, and increasingly at both inner and outer bypass junctions at peak times.

Hereford is an ancient cathedral city, compact and self-contained, strategically located at a crossing of the River Wye. It is the centre for a large rural area, and is more remote than the other study settlements. Some traditional manufacturing remains, and it has a major employment area to the south of the city at Rotherwas. It is the smallest of the three places studied, and has a much less developed road system than the other two, with no bypass and only one principal river crossing. The A49, A465 and A438 all pass through the city, although a partial inner ring road allows this to bypass the historic centre which is partly pedestrianised. Congestion is already a significant problem, even without new development. A major city centre regeneration scheme, the Edgar Street Grid, is proposed.

8.3 Typography of place – travel and transport behaviour

In addition to the road networks described above, all of the study towns have made provision for sustainable modes of transport in recent years. The use and performance of each mode. In each place, has been examined in detail (Chapter 3).

Telford has the best connections to the national and regional road network. All three places have relatively good rail connections, though Hereford is more remote than the other two places.

All three settlements are relatively self-contained, with a surprisingly high percentage of people living and working in their home town or city: Telford (79%), Shrewsbury (72%) and Hereford (76%). All three have a net daily influx of employees, mainly from their immediate hinterland. About 10% of Shrewsbury residents commute to Telford, but apart from this there are no dominant patterns of commuting beyond the local area of each settlement.

In all three places, most people drive to work, but there are marked differences between them: In Telford, 64% drive themselves to work, compared with 58% in Shrewsbury and only 54% in Hereford.

Bus services are varied, with some parts of each settlement better served than others. Usage is fairly low, with only 6% using bus or train for work journeys in each place. After a period of growth, there are concerns that bus use could level off or services decline in popularity.

Some 32% of people in Hereford travel to work by low carbon modes (walking or cycling) or work at home. The equivalent number is 28% for Shrewsbury and just 18% for Telford. All three places have extensive cycle provision, though there is room for improvement. In their different ways, all three places have pedestrian-friendly town centres, but access to these centres on foot is less easy, especially for Telford.

On the evidence, Hereford has the most sustainable pattern of transport, and Telford the least, as it is most dependent on the private car. In Shrewsbury, there is some indication that newer developments may be less sustainable than established residential areas, irrespective of their distance from the centre.

8.4 Typology of place – smarter choices healthchecks

The development of the Sustainable Travel Towns programme (Peterborough, Darlington and Worcester) coupled with the Cycling Demonstration Towns programme and Personalised Travel Planning projects have all pointed to the importance of sustained, interdependent linkages between infrastructure provision for sustainable transport and behaviourally based interventions.

Other recent case studies show the potential for area wide travel plans and other smarter choices measures to enable new development to take place with less dependence upon increased highway capacity.

An assessment of the use and acceptance of smarter travel measures (described in Chapter 5) enabled us to undertake a “smarter choices health check” for each study settlement.

Telford demonstrates a good variety of travel plan applications across a wide range of land uses. The sample school travel plans we evaluated demonstrate all the features of a sound operational school travel plan and demonstrate active commitment. The office sector included voluntary travel plans which again were simple yet effective although regular monitoring was still a potential weakness here. On the evidence collected, Telford is ‘ready’ to take smarter travel solutions to the next level, with the introduction of area wide travel planning and other tools to encourage business engagement. The schools sector remains strong, but the next challenge is to look at the employment and town centre regeneration opportunities as a key lever for smarter choices investment.

Shrewsbury was able to provide a good range of travel plan examples, particularly in the education sector. Both engagement and monitoring and particularly strong, with a good balance of ‘hard’ and ‘soft’ measures used to achieve modal shift. Overall, whist the Council, schools and a limited number of employers (e.g. PCT) are ‘ready’ to move forward with a pro-sustainable transport strategy there is still a need for other organisations to be ’brought up to speed’ and for cultural acceptance of some of the latest thinking on sustainable transport. Further development of the Cycling Town approach to achieve this may well be successful, as it provides a very visible way of communicating the importance of sustainable travel.

In **Hereford**, it is clear that the schools are taking travel planning seriously and are treating them as ‘living’ projects. The action planning process is SMART and look at a variety of measures. Commitment in terms of school engagement and community support also appears strong. The

Rotherwas Industrial Estate area-wide travel plan is the most comprehensive in Herefordshire and sets a good example for the other growth towns. The travel plan itself is comprehensive and the Council have ensured that monitoring has taken place since 2000, together with provision on an on-site coordinator in more recent years. Overall, Hereford has the capacity to build very strongly on its travel plan legacy particularly focusing on the area wide approach and the schools sector.

On the evidence presented, none of the study settlements has any “show-stoppers” towards to the development of smarter choices; however in terms of maturity of solutions and public acceptance of smarter choices Hereford has demonstrated the most ‘fertility’ in this area, followed closely by Shrewsbury and Telford. All the evidence is that smarter choices measures, such as personalised travel planning, work best when there is strong local authority support, and where alternative, more sustainable modes of transport are available.

8.5 Potential impacts of growth

Each of the three study settlements is designated as a growth point, and together they are set to receive up to 40,000 new homes between 2006 and 2026, as well as additional employment development (Chapter 4). This amounts to about 46% housing growth in Telford, 23% in Shrewsbury and 39% in Hereford.

In each place, sufficient work has been done by the local authorities to enable the broad impacts of this growth to be assessed, but work is continuing in each place on the details of site allocations. Traffic models have been used to determine the impacts of the growth point and committed developments, as well as to test potential major highway proposals. These models are still being developed, and improved versions should be available for Phase 2 of this study. Available results show that in all three places planned development would – all else being equal – lead to a significant increase in travel demand and greater congestion.

In all three places, there are plans for major road schemes: the Greyhound Link Road in Telford, the North West Relief Road in Shrewsbury and the Hereford Relief Road. Whilst the main purpose of this study is to identify a full range of options for addressing the issues associated with growth, particularly sustainable transport options, these major road improvements cannot be ruled out as a possible part of the solution – for example in Hereford the single river bridge is a serious constraint on development, whilst the level of planned growth (39%) is greater than the reductions that can have, to date, proved to be achievable through smarter choices interventions alone. In Telford, with the highest overall level of planned growth (46%), the Greyhound Link is part of a wider strategy to create a greater density of development in the town centre, whilst enhancing its pedestrian and cycle access and improving connectivity to the strategic road network. In Shrewsbury, there are concerns that traffic growth to 2026 will worsen the existing problems of congestion, including those on the strategic A5/A49 bypass.

8.6 Challenges

A number of challenges have been identified throughout the study, and set out at the end of each chapter. These are brought together in Appendix 7. All are important, but the key challenges in each place are considered to be:

- In **Telford**, to use housing growth to re-shape the urban form, to encourage more sustainable travel and avoid further reinforcing its car-based culture.

- In **Shrewsbury**, to accommodate substantial housing growth whilst further developing characteristics conducive to sustainable travel behaviour. As Shrewsbury grows, there is a danger that it could become more, not less, car dependent.

- In **Hereford**, with its less developed highway network and single principal river bridge, to cope with the impacts of the substantial growth proposed whilst further developing the existing characteristics conducive to sustainable travel behaviour.

8.7 Potential interventions and option evaluation

The challenges we have identified arise from the existing transport problems and the very significant planned growth in each place. Against this background, it is even more important to identify the most appropriate packages of interventions capable of reducing the demand associated with new development and encouraging greater use of sustainable modes of transport. To this end, an exhaustive list of potential interventions has been drawn up (Chapter 6) and evaluated using a specially adapted assessment tool (Chapter 7).

Tables 7.1, 7.2 and 7.3 represent, for Telford, Shrewsbury and Hereford respectively a “profile” of generic interventions that are considered most likely to be effective in meeting the challenges associated with growth in each place. Each has the potential to inform development of a specific package of measures for each settlement, to be implemented alongside housing and employment growth. Some of the key opportunities for each place are summarised briefly below.

For **Telford**, such a package would include a strong emphasis on cycling, reflecting the approach taken in the Cycle Demonstration Towns. The greater distances involved in this, the largest of our study settlements means that cycling rather then walking has the greater potential, although there is scope for further improvement to pedestrian routes. There is also potential, given Telford’s extensive highway network and record of success with Quality Bus initiatives, for buses to play an increasingly important role, with improved bus frequencies supported by bus priority, an extended network (including services to new housing estates from “day one”) and better bus-rail integration linked to a rail station travel plan. The introduction of Area Traffic Control (e.g. enhanced UTMC) could also have benefits for public transport, together with real time passenger information.

The evidence suggests that a robust application of Smarter Choices measures should also play a big part in a Telford package. This would include, for example, corridor based schemes covering residential areas, schools and workplaces, personalised travel planning aimed at specific market segments, wide area travel plans working with new and existing businesses and targeted active travel promotions emphasising health and wellbeing. There is scope to build on existing success with Travel Plans for new and existing residential areas, with more encouragement and enforcement of these through the planning regime and use of an SPD to enshrine Smarter Choices within the planning process. Promotion and marketing of sustainable transport should also be built in to any package, recognising the success of recent travel awareness campaigns.

In Telford particularly, the location and character of new housing development has a key role. It would all too easy for new development to reinforce the car-based culture, yet there are also real opportunities to change this by achieving greater density of development which will make bus use more viable. The character and detailing of new development can also affect the mode choices people make, and this can be addressed through planning guidance and Section 106 strategies.

As discussed above, the proposed Greyhound Link Road could form part of an overall package, enabling greater density of development and better access by all modes to the town centre.

For **Shrewsbury**, a package would build on the existing Cycle Towns initiative to further enhance cycle provision and promote cycling throughout the town. Shrewsbury's compact nature and historic character provides opportunities to support and encourage walking, by further improving pedestrian routes and connections, and by ensuring that new housing, commercial and employment developments are pro-actively designed to encourage walking, by providing attractive, direct routes and a high degree of pedestrian connectivity. There is scope too for improvements to the perception of public transport in the town, including potential for improvement to, or replacement of, the town's bus station. There are corridors which suffer from poorer frequencies. Through targeted use of spatial planning tools (Area Action Plans, SPD guidance and Section 106 strategies) it will be possible to encourage improvements to bus access, as growth occurs. Consideration should be given to a new rail station, (to serve both as a parkway station for out-commuting and as a possible fourth park and ride site) and development of a rail travel plan.

The evidence suggests that strategic smarter choices and travel planning interventions should feature strongly in a package for Shrewsbury. However, for these interventions to be effective requires investment in walking and other sustainable modes, and continued use of behavioural tools such as walking buses for school children. There is scope for area traffic control to make best use of Shrewsbury's constrained road network and to support bus use, as well as more advanced ITS systems for car parking to encourage use of Park and Ride. There is scope for robust control and management of car parking as a demand management tool.

Shrewsbury already has a head start in optimising the potential for smarter choices because of the Cycling Town programme. A natural step would be to upgrade to a full Sustainable Travel Town status, following the example of towns such as Worcester and Darlington.

As discussed above, there is potential for a North West Relief Road to help avoid a worsening of existing congestion problems at critical points on the town's road network, including the trunk road bypasses, as the town develops.

For **Hereford**, there is the potential to build on the already high levels of cycling, by adopting an approach similar to that in the Cycle Demonstration Towns, with a mixture of physical improvements, promotional activity, information and signage. Hereford is also a very walkable city, and any package should include further improvement to pedestrian routes and connections, and continued promotion of walking (e.g walking buses for school children). There is scope for the introduction of Park and Ride to the town centre. With its constained road network, there should be opportunities to develop Area Traffic Control measures to give advantages to buses.

The Hereford culture has been generally responsive to environmental and 'green branding' and this should continue to be a key theme. The evidence suggests that strategic smarter choices and travel planning interventions should continue to feature strongly in a package for Hereford, building on what has already been achieved through school travel planning and particularly the Rotherwas employment area travel plan. This should include both increased promotion and marketing, and a continued pro-active and innovative approach to travel planning, with personalised travel plans, wide area travel plans, and residential travel plans, secured through Section 106 agreements and development control policies. The authority is already moving forward on developing guidance for travel planning, which will formalise developer requirements.

As discussed above, there is potential for a Relief Road to play a significant role in addressing the congestion which is already evident on the A49 trunk road, by providing an additional crossing over the Wye. Consideration needs to be given to both the extent and possible phasing of a Relief Road in relation to the planned growth.

8.8 Funding

In all three places there are opportunities to secure investment in sustainable transport through the planning process, as described above. There is a clear need for spatial planning and transport planning decisions and policies to be fully integrated, given the scale of growth planned in each place and the potential implications and opportunities for transport.

The recent approval of a major scheme business case for an integrated package of transport measures in Ipswich also highlights a way forward in terms of funding. Traditionally, it has often been easier for authorities to secure funding for one-off major interventions, than increased funding for smaller scale measures which work together as an integrated package. The "package approach" to funding in TPPs over 10 years ago was a precursor to this, and crucial to the development of Shrewsbury's Integrated Transport Plan.)

Chapter 8: Summary and conclusions from Phase 1

There is a wide range of measures available to each of the three study settlements (and similar places in the West Midlands and the UK generally). The exact package needed to help address the challenges of Growth Point development will be different in each place, reflecting real social, economic and physical differences between them. Nevertheless, there are some common themes which emerge, especially:

- ***the need to ensure that new development takes place in a way that encourages use of more sustainable modes of travel, and***
- ***the need to make systematic use of a wide range of Smarter Choices interventions, such as travel planning, linked to the provision of attractive alternatives to car use.***

Both of these will require very close co-ordination of spatial planning and transport planning policies and strategy and decisions at every level.

In each place, potential major highway schemes have been under consideration for some time, and are the subject of detailed work by each authority. None can be ruled out in this Phase 1 study, as any of them could form part of a wider package. However, their timing, extent and overall justification must relate to the development planned in each place and the extent to which challenges could be addressed by other means.

In Phase 1, we have identified, and undertaken a preliminary sift of, a very wide range of generic interventions which should now be taken forward for further more detailed consideration in Phase 2.

9 Gaps in evidence and issues to be taken forward in Phase 2

This chapter identifies the areas where more evidence may be needed in order to determine the most appropriate package of measures for each settlement.

It then outlines areas of work which should be taken forward in Phase 2 to determine in more detail the appropriate way forward for each of the study settlements, and to enable these places to serve as exemplars of different approaches to delivering a more sustainable transport system in an environment of housing and employment growth.

9.1 Gaps in evidence

Throughout this report, we have identified a number of areas where there is a lack of evidence. These are summarised below:

- There is only limited evidence on the link between economic growth and transport connectivity. There is a concern that housing growth could occur without commensurate growth in jobs.
- There is a need to examine further the way that the physical layout of new development influences people's use of sustainable transport.
- There is a need, in Phase 2, to examine the emerging land allocations in more detail, for example to quantify the benefits for sustainability of Telford's focus on denser development in the town centre, and to examine further the relationship of allocations in Shrewsbury and Hereford to existing transport networks, and potential improvements.
- There is scope for improvement in the transport models – for example the inclusion of mode choice in the Telford model and further investigation of the way the Hereford model deals with very congested future networks.
- There is scope, in Phase 2, to use these models for to test the options identified in this Phase 1 study – at the moment they are mainly being used to test the major road proposals.
- Need for detailed longer term monitoring of the effectiveness of measures such as personalised travel planning where applied in each place
- There is a need, in Phase 2 of this study to quantify, as far as possible, the contribution which different types of intervention could make to reducing the demand for travel and encouraging use of more sustainable modes, using the evidence now becoming available on this.
- A key task for Phase 2 will be to develop more specific packages of measures for each of the study settlements, based on the prioritised list of generic interventions, and on the examples of best practice identified in Phase 1.

- There is a need, in Phase 2, to estimate the contribution each package could make to reducing carbon emissions.

9.2 Proposals for Phase 2 (subject to DfT approval)

Telford, Shrewsbury and Hereford are typical of many similar towns and small cities in the WM and the UK generally. Thousands of new homes are planned for such places. Phase 1 identifies the types of interventions needed to address the resulting challenges. Phase 2 will build on the evidence of Phase 1, helping to develop practical packages and giving insights into what could be achieved in these and similar places.

- Phase 2 of the study will start from the results of the preliminary sift of generic options. Working closely with the three local authorities, more specific options will be identified

- Further work will be undertaken to determine the level of demand reduction and/or mode shift and carbon reduction that can be expected as a result of these options, using the traffic models as appropriate;

- This will include further consideration of the way that the physical layout of new development influences people's use of sustainable transport;

- Further consideration of the links between transport and economic growth

- Drawing on the detailed studies being undertaken in each area (including the revised models and work to determine locations for development), work will be undertaken to determine in more detail the relationship of the possible highways options to planned development;

- Further sifting will then be undertaken to compare all the options and identify possible alternative packages for each of the settlements;

An appraisal of the most promising options and packages to arrive at a preferred solution.

As well as helping develop realistic packages for each of the study settlements, Phase 2 of this study provides an opportunity to develop exemplar packages, albeit at a high level, which could have application in other, similar places. This is an important opportunity, because of the identified differences between the three places in terms of their size, character, existing sustainability and scale of existing transport infrastructure.

Chapter 9: Gaps in evidence and issues to be taken forward in Phase 2

Summary

Subject to DfT approval:

- ***Phase 2 will address identified gaps in the evidence available for Phase 1, either by through new work or through work undertaken in other DaSTS studies or by the local authorities in each study settlement***
- ***Phase 2 will start from the generic interventions identified as having a potential role in each settlement, and identify more detailed options which are capable of implementation in practice***
- ***Potential packages of options will be developed and further evaluated, in order to produce a preferred solution for each of the study settlements***
- ***Phase 2 will result in exemplar packages which will have lessons for similar growth locations in the West Midlands and other areas.***

Case Study 1: ‘Ipswich – Transport fit for the 21st Century’

Case Study 2: Telford International Railfreight Park

Case Study 3: Quality bus routes in Telford

Case Study 4: Safer routes to school in Telford

Case Study 5: Historic Core Zone, Shrewsbury town centre

Case Study 6: Cycling Shrewsbury

Case Study 7: School travel initiatives in Shrewsbury

Case Study 8: Supplementary Planning Document

Case Study 9: Rotherwas Travel Plan, Hereford

Case Study 10: Smarter choices and development

Appendix 1a The DfT Sustainable Towns Demonstration Project

Appendix 1

Synopsis / Commentary Sustainable Travel Towns Programme – Lessons Learnt

Synopsis of Overall Programme Success (based on effects of Smarter Choice Programmes in the Sustainable Travel Towns (STT) – Summary Report January 2010)

Key Background

The STT programme extended over a period from 2004-2009, with detailed travel surveys undertaken in 2004 (baseline) and 2008 (to assess modal and behavioural change).

Overall the programme cost a total of £15 million across the 3 towns of which £10 million was provided via the Department for Transport.

The objective of all 3 towns was focused on the reduction in single occupancy car use, with over 80% of respondents considering traffic congestion and growth to be a local concern in each town.

In terms of the hierarchy of spend, personalised travel planning accounted for between 30 – 50% of revenue spend in each town, This was then supported by expenditure on travel awareness, walking and cycling, public transport marketing, and then by lesser amounts on workplace and school travel plans, mainly because there was a good legacy of delivering these tools in the 3 STTs anyway.

Headline Metrics

The headline metrics after 4 years of interventions were:

- Car driver trips reduced by 9%;
- Car distance reduced by 5%- 7% overall compared with similar towns with no interventions only seeing a 1% reduction;
- Bus use increased between 10%- 22% against a tide of gentle decline in other similar towns (0.5%). Bus growth was focused on Worcester and Peterborough with a less positive trend in Darlington;
- Cycling uniformly produced substantial results across all 3 towns ranging from 26%- 30%. Not surprisingly Darlington showed the highest growth because of its ‘dual status’ as a Cycling Demonstration Town;
- Walking saw a high level of increase of up to 13% whereas other towns with similar population demographics and size have seen decline in walking to the tune of nearly 20%.

In terms of the range of shift from car reduction to sustainable travel modes the numbers of trips affected was smallest in Worcester, reflecting the relatively compact nature of the city. Larger settlements, such as Peterborough, saw the most ‘swing’ per capita because of the larger geographic area and the attractiveness of bus to replace some of the medium and longer distance car trips.

Understanding the importance of behavioural change

There are a number of key issues around behavioural psychology which are important to the development and wider application of the STT approach. and which are more significant than the individual measures themselves. The research has illustrated that there are a wide number of reasons why people change mode and travel patterns and that it is difficult to refine down to one single intervention being the *'tipping point'* for any one person to change behaviour.

The key factors include:

- The biggest 'opportunity' to achieve mode shift is presented when people are adapting to a lifestyle change. This conclusion supports work already carried out in evaluating the impact of residential travel plans and the benefits of front-loading travel plans and setting processes in place that captures mode shift at the point of decision to move into a new area, not afterwards.

  Evidence from Crest Nicholson's Bolnore Village (Haywards Heath) public inquiry deals with this issue (Appeal decision 2007 refs APP/D3830/A/05/ 1195898; APP/D3830/A/05/1195897; APP/D3830/A/06/1198282; APP/D3830/A/06/1198283);

- People who are within a defined market segment on a more permanent basis (i.e. those on a reduced income who are more dependent on public transport, walking or cycling) are also a key target audience and more likely to change mode;

- Depending on the range of measures introduced, the types of segments reached will vary. Given the relatively low emphasis on commuter trips and more on leisure, retail and personal business, the biggest reduction in car drivers occurred in these latter categories;

- The pre-existing public attitudes within a town (including their perception of car use/growth, sustainable transport policy, and public transport and cycling) are critical in moving forward with a STT programme that is culturally and socially relevant. If all 3 STT towns had tried to start from an identical range of interventions, and had not taken time to understand the underlying needs of the area through the household survey then the level of success may not have been so high. This is why the DaSTS Stage 1 assessment has deliberately looked at both technical and public acceptability of interventions, considering whether professional and public attitudes are 'ripe' enough for more radical interventions to be considered within the mix. The STT approach validates the approach taken in the West Midlands study and also supports the weighting process that has been integrated into the DaSTS evaluation tool.

- The level of staffing and resources required – all 3 STT towns utilised teams of between 6-10 people in order to deliver the concentrated activity required;

- All of the STT programmes supported the DaSTS objectives but did not offer any specific weighting in terms of any one specific objective being met. However on the basis the STT programmes have 'hit the mark' in terms of

BCR (factor of 4.5) and wider environmental, social and economic indicators, the review process very positively suggests that a substantial expansion of Smarter Choices programmes is justifiable.

Town Overviews – and their links to the West Midlands DaSTS studies

The town overviews within the STT report are similar in purpose to the DaSTS overviews being undertaken as part of this West Midlands based study. Whilst Worcester's experience is particularly helpful, the other STTs have useful parallels for the West Midlands towns i.e.

Darlington – this is a Cycling Town (as is Shrewsbury) as has seen major decentralisation of employment (in the same way as Telford's economic growth has tended to be generated from 'off-centre' and 'out of centre' employment locations). The combined impact of behaviour change funding alongside cycling infrastructure also provides a much more powerful opportunity for modal change than if they had been looked at these measures separately. Lessons surrounding active travel from Darlington also have specific relevance for Telford.

Peterborough – this city has developed on 'new town' philosophy and therefore has key correlations with Telford. Their political positioning in terms of car accessibility and 'keeping the city moving' also echoes views presented in the DaSTS assessment process for Telford.

Worcester - given its historic city form and relatively tight boundaries, has particular lessons for Hereford and Shrewsbury. The towns are similar in terms of their relatively high levels of car use (except near the city centre where there is strong predominance of walking), coupled with the traditional street layout which makes it difficult to retrofit sustainable transport infrastructure in all 3 locations.

Smarter Choices Interventions

The strategies adopted in the 3 towns were based on a series of 'smarter travel themes' i.e:

- Brand awareness and identity;
- Personalised Travel Planning;
- Travel awareness campaigns;
- Cycling and Walking promotion;
- Public transport Information and marketing;
- School travel planning;
- Workplace travel planning;

- but within each town the balance of these interventions was different, taking account of the household surveys carried out in 2004 at the beginning of the process.

This approach further validates the West Midlands DaSTS assessment process as all these types of interventions are included within the Growth Towns assessments, but are complemented by further 'families' of interventions beyond the smarter travel and behaviour changes themes. This has ensured that all interventions have been assessed in a fair and transparent manner.

Levels of Investment and Return

Whilst revenue expenditure is a helpful indicator of where resources have been targeted, this does not necessarily mean that the tools receiving lower subsidy were less effective. PTP programmes, to be successful required quite hefty input (33% - 46% of total budget) but in contrast all STT's revenue spend on travel plan support was recorded at less than 10% of their budget. This points to the fact that the school and workplace travel programmes already in place were robust and core to the authorities strategies for commuter and school run car reduction, and that the STT budget was only required to 'crank up' the service in this area with little additional outlay.

In terms of return on investment for individual measures the following key lessons can be learnt:

Workplace travel planning – all towns have seen an increase in workplace travel plan take-up, with over 10% of the workforce covered by a fully-fledged travel plans There appeared to be a natural ceiling affecting all 3 towns beyond which it was difficult to get employers to be fully engaged and this may be due partly to focus on commuting, as opposed to the commercial and business travel efficiencies of tackling in-work travel. If the West Midlands growth towns elect to use travel planning as a core part of the forward strategy this will require innovation in order to get past this threshold which has limited sustained development of 'advanced' travel plans in the STTs.

School travel planning – the DSCF requirement for STPs coupled with central government grants for capital works were seen as major drivers for school travel uptake. Darlington had the added advantage of its designation as a Cycling Demonstration Town which made it easier for safer routes infrastructure to be provided.

PTP – the PTP prgrammes varied between 50% - 100% exposure to the population with Worcester limiting its target markets to 60% of the population. The range of opportunities promoted through PTP was comprehensive and wide ranging and made use of literature / information and other incentives to maximise take-up.

Public Transport – whilst the core offering in all 3 towns was based on effective publicity and marketing, for Peterborough and Worcester, this was clearly accompanied by significant improvements in service quality / experience, frequency and vehicles. This wider investment has paid dividend with significant increases in patronage in these 2 towns.

Cycling and Walking – this is a town wide programme and therefore can 'appeal' to the whole population. In addition to promotion, infrastructure investment was carried out in all 3 towns, including signage and legibility improvements. Darlington received the biggest boost to capital investment through the Cycling Town programme.

Travel Awareness – each town developed a clear brand that would be culturally relevant and acceptable to its communities, including *'Local Motion'* in Darlington and *'Good Going'* in Peterborough. Notably brand recognition was quite a lot lower in Worcester (nearly half that of the other 2 towns) due to lack of one single brand name campaign and the investment placed in residential targeting in Darlington and Worcester.

Drawing some key conclusions

Overall, the STT programme has demonstrated a strong BCR, at least double that normally entertained for viability of road-based infrastructure schemes.

It is clear that it is not appropriate to directly 'translocate' STT measures to another, similar town because of the underlying social change demographics and cultural acceptance issues already pre-existing in other towns (as healthchecked by the 2004 baseline surveys in the 3 STT pilots).

Putting in place a broader programme, with a mix of measures under one common branding umbrella, is more effective than 'silo' promotion for bus, cycling etc, because people's choices to alter mode are complex and are not simple 'either / or' choices.

Programmes are capable of adaptation to deliver a 'lean' towards certain modes (i.e. Peterborough / Worcester = bus, Darlington = cycling) but there still needs to be a blend of measures cutting across different modes for the strategy to be a success

In order for a 'pro-smarter choices' to be rolled forward as part of a DaSTS approach requires certain pillars to be put in place if the BCR's generated here are to be delivered elsewhere i.e:

- Sufficient staff to see through an intensive revenue-driven programme
- Long-term commitment (in line with DaSTS to 2019/2024)
- Strong engagement with partners and elected Members
- Delivery of capacity constraints on the systems to 'lock in' trips saved off the network (which is a part of the DaSTS assessment tool)
- Strong branding message associated with innovation

The study recognises that there is still potential in the STT towns to reduce the level of longer distance commuter trips (over 10kms) but that the families of interventions tested in the 3 STT's possibly did not tackle this market head-on, and that a more systematic approach to tackling commuter trips is needed in future. The DaSTS assessment process for the West Midlands towns attempts to look at the wider range of interventions so that no trip purpose is excluded.

The overall mode shift levels cannot be attributed to any one specific intervention. The summary report concludes that *'in terms of the weight given to specific types of smart initiative, the similarity of the programmes in the three towns makes it impossible to estimate quantitavely what might be the optimum balance of resources between different smart measures '* (p43). Whilst PTP was a common denominator; all 3 towns decide to 'angle' their approach in a different way, targeting those markets that they considered the population would respond towards positively.

For the 3 West Midlands growth towns, a similar approach is needed – to *'get under the skin'* of the population, their needs and motivators and build up a profile that fully appreciates their culture and ability to change. The DaSTS first stage assessment process attempts to do this building on existing data and professional knowledge of skilled officers, so that the 'starting point' for each growth town fully recognises their constraints and opportunities.

There is no legitimate reason why an STT approach cannot work within any of the 3 growth towns, but decisions will need to be made about the premium drivers for each settlement e.g.

- Telford – cycling (for health) and bus
- Shrewsbury – cycling (build on Cycling Town) and travel planning
- Hereford – a wider blend of all measures

Worcester – specific Summary

The final evaluation report suggests that mode choice has reduced by 3% for car as driver, 1% for car as passenger, translating to 3% more walking and 1% more on the bus. When revised to review in trips per year, walking is up 11%, cycling 19%, bus 20% though other public transport drops 15%, and car as driver drops 7%, car as passenger 4%.

There is a suggestion there has been no overall change in travel characteristics so the above are real mode changes that have occurred over the Worcester STT programme

Main changes were for off peak, education and leisure trips; for 20-59 males followed by 20-59 females. Note that the greatest change was for the not-employed group

19m car km / yr were removed, reducing 3900 tonnes per year of carbon from the network.

The 2004 baseline gave suggestion there was significant potential for change to sustainable modes - although it is felt only a part of the potential has been realised. Improved information had significantly reduced the barriers to public transport use. Individualised travel planning had also helped.

The Socialdata report is particularly helpful in identifying the different market segments that were open to interventions; for Worcester public transport, cycling and walking were all seen as part of a balanced strategy with cycling and public transport groups of interventions seen as the two most effective areas to be pursued.

The global modal shift achieved between 2004 and 2008 however has been due to the provision of an integrated mix of measures rather than one single action which has resulted in a high BCR. Worcestershire Council are still in the process of finalising their detailed evaluation reports with DfT, which will report later in the year on the effectiveness of specific measures.

Sustainable Travel Town Approach – Some Further Observations

Whilst Worcester is a key reference town within the West Midlands, there are characteristics of the other Sustainable Travel Towns which are also relevant to the 3 growth point locations.

Peterborough's STT programme leant heavily on bus as a primary driver, which aligns itself with Telford's historic emphasis on bus routes to link housing, employment and the town centre. Similarly Darlington's emphasis has been on cycling given its Cycle Town status. This is also important for Shrewsbury given its

current emphasis on cycling projects and programmes and its shared status as a Cycling Town.

Rather than focus on very specific mode shift achievement (which would not be automatically achievable in another location with different demographics) the key issue for consideration is whether by adopting a blanket sustainable travel town approach, that the West Midlands locations can achieve more reductions in single occupancy car use than would be achieved through running a series of complementary activity streams.

All of the STT measures are largely uncontentious and have included many of the positive interventions covered in this DaSTS study. Personalised travel planning was a key vehicle to reach the local communities, with Worcester targeting areas of higher-car ownership rather than adopting a blanket approach.

Overall car use has fallen by 9% across the 3 towns, with increases of walking of over 10% in every town. Bus use has also been healthy with a 20% uplift in Worcester. Cycling in Peterborough rose by 12% with a 19% uplift achieved in Worcester.

Overall over 53 million miles of car travel were saved through the initiative, translating into over 17,000 tonnes of carbon savings.

Significantly, all 3 towns demonstrated social characteristics that the towns were 'ready' for change. Over 85% of residents favoured a local transport strategy that promoted public transport, walking and cycling, even if this disadvantaged private car use.

A key factor of all 3 towns was their pre-existing commitment to Smarter Choices in some shape or form, and the way in which this had been prioritised within the Council's activates. This provided a bedrock on which to build, and for example Worcester had already worked successfully with over half its schools prior to the STT project getting under way. All of the STT towns introduced or supplemented staff working on school or workplace travel plans and ensured that the PTP programme sold integrated messages about modal choice.

If we link this back to the original 2004 study on *"Smarter Choices – Changing the Way we travel'* (as summarised in another synopsis) then we should see some correlation between the 'combination of measures' approach that this study advocated and the outputs from the STT programme

Given the level of investment by DfT and the local authority in the STT programme, and the emphasis on PTP engagement and awareness raising, we can assume that the STT's have all embraced the requirement of a 'high intensity' programme. The original predictions were:

- A reduction in peak period urban traffic of about 21% (13% in off peak conditions)
- A reduction in peak period non-urban traffic of about 14% (7% in off-leak conditions)
- A nationwide reduction in all traffic of about 11%

These predictions were caveated with the issue of reallocation of roadspace and the presence of supportive 'sticks' However in terms of scalability it suggests that

properly managed travel behaviour programmes in specific towns can achieve this level of mode shift from single occupancy car use, and that targeted investment can reduce levels of traffic on specific corridors much higher than the generalised 9% STT figure.

In addition the STT model has had a positive impact on human health, with the advocacy of active travel as a major component. The development of a STT integrated travel town approach therefore tends to support DaSTS goals more than individualised interventions, and creates a way of more effectively harnessing PCTs at a local level

Moving Forward – Sustainable Travel City Programme

The Sustainable Travel city Programme unfolding during 2010, reinforces the ideas that a wide area approach to smarter travel interventions is more effective that individual best practice projects operated in a discrete manner. The Sustainable City approach is heavily focused on conurbations and aims to reduce congestion reduce carbon, and increase healthy activity. The types of strategies the DfT have identified are broader than the STT interventions and match in very well with the types of interventions discussed in the Growth Points DaSTS evaluations i.e.

- Workplace travel planning
- School travel planning
- Cycle training
- Personalised travel planning
- Online journey planning
- Car share and club schemes
- Dedicated bus routes
- Improved bus stops and sheets
- Cycling/Pedestrian routes
- 20 mph zones
- Consideration of parking provision

Validation of West Midlands DaSTS approach

This synopsis therefore validates the approach that has been taken in systematically evaluating the power and scope of different types of interventions (beyond 'smarter choices and promotion based interventions) to address the 5 DaSTS goals (which include carbon, congestion and health) and has included all the key interventions featured within the Sustainable Travel Towns/City programmes.

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Appendix 1b The DfT Cycling Demonstration Towns Project

1 Cycling Demonstration Towns - Synopsis

1.1 Introduction

In October 2005 Cycling England granted 'Cycling Demonstration Town' (CDT) status to six towns across England, with funds from the Department for Transport. The towns involved in the first phase of the programme (October 2005 – March 2009) included, Aylesbury, Brighton, Darlington, Derby, Exeter and Lancaster with Morecambe.

The towns received funding of £500,000 per year (starting in October 2005) from Cycling England/DfT which was matched by each local authority. This funding enabled them to set up an initial three-year travel behaviour change programme, including both infrastructure and Smarter Choices measures, to increase cycling for short urban trips. The funding equated to approximately £10 per head of population per year, and collectively, approximately £7m of funding over three years was provided by Cycling England/DfT which was matched by local authorities.

It is important to note however, that during this period Darlington was also part of the Government's Sustainable Travel Town programme and therefore received additional funding for the implementation of large scale Smarter Choices Programme. Aylesbury also received a slightly lower level of funding, due to its smaller population whilst Derby and Brighton did not receive any extra funding due to its larger population; instead these areas focussed their efforts on particular geographical areas.

The Cycling England CDT programme aimed to learn about the relative impact of different types of measures in different local contexts, as well as about best practice implementation of the most effective measures, enabling other local authorities and stakeholders to learn from these demonstration projects and making the case for further investment in cycling. A comprehensive monitoring programme was implemented through Sustrans Research & Monitoring Unit, the University of Bolton and Leeds Institute for Transport Studies to accurately measure and monitor cycling within the six towns.

1.2 Headline Metrics

The headline metrics (based on averages across all six towns) covering the CDT investment programme between October 2005 and 2009 are as follows:

- The mean increase (from the 2005 baseline) in cycling across all six towns was 27%.
- The proportion of adults that cycled once or more per month increased from 11.8% in 2006 to 15.1% in 2008.
- The proportion of adults who cycled regularly (for at least 30 minutes, 12 times of more per month) increased from 2.6% in 2006 to 3.5% in 2008.

- The proportion of adults undertaking any cycling in a typical week increased by 14%.
- The proportion of pupils for which cycling is the usual mode of travel to school has increased by 16%.
- At those schools which were the target of the most intense support in towns, the proportion of pupils cycling to school either everyday or once or twice a week has increased from 11.6% to 26.2%.
- Cycling mode share for trips to these schools increased from 4% to 11%.

1.2.1 Rate of Cycling Growth

- The rate of growth of cycling in Cycle Demonstration Towns is in line with that achieved in London between 2005 and 2008.
- The growth rate in cycling levels for the Cycling Demonstration Town programme is in line with growth rates in cities which have demonstrated sustained long-term commitment to cycling.

1.2.2 Demographic Differences in Behaviour Change

The monitoring of modal change within CDTs also required an understanding of the demographic of the socio-economic groups within the towns. This provided a background to understanding the reasons and rationale behind any modal shift. Specifically the following was found:

- The propensity to cycle (at the 2006 baseline level) generally decreased with age from 36% amongst 16-24 year olds to 5% of those aged over 75.
- There was little change between 2006 and 2009 in the proportion of 16-24 year olds cycling, the largest increase was with middle aged groups (those aged 35-64).
- The proportion of male respondents undertaking any cycling within a typical week increased from 31% to 35%, and 18% to 21% of females between 2006 and 2009.
- Adult respondents living in households with children were generally more likely to have cycled in the last year (2009). 31% of those in households with children were more likely to cycle compared to 21% in households without.

1.3 Cycle Demonstration Town – Cost Benefit Analysis

The Cycle Demonstration Towns were subject to extensive monitoring however, for a full appraisal of the benefits the calculation of a range of variables would be required including mortality, morbidity, absenteeism, air quality, congestion, journey ambience. This data was not collected for many of these areas and therefore a full robust cost benefit analysis has not been possible. However, the following conclusions are possible:

- The health benefits are worth approximately £2.59 for every £1 spent (due to reduced mortality).

- The most significant additional benefits were decongestion and journey ambience.

1.4 Cycle Demonstration Town – Summary

The results from the analysis of the data do show that there appears to be a consistent picture of an increase in cycling across all of the six towns. There are a number of other key conclusions that also need to be highlighted as part of the study, in particular analysis of the monitoring data shows that:

- Increase in cycling within CDT is unlikely to be simply a reflection of some wider trend.

- The current information does not allow conclusions to be drawn about which interventions, in which towns were more successful or less successful. Therefore it is not known the effect of focussing efforts on either schools/workplaces/infrastructure has on the overall level of cycling within a town.

- The analysis does show that a sustained well-designed programme of investment in cycling to the level of approximately £10 per head of population was sufficient in all of the CDTs to achieve an increase in cycling.

- A determination to increase cycling levels in conjunction with a carefully considered strategy and modest investment could be expected to increase cycling levels by between 10% and 50% within a modest timeframe (in towns with relatively low cycling levels).

- The initial analysis of CDTs revealed that the investment may offer good value for money, as for each £1 invested the value of decreased mortality is £2.59.

However, it is important to note that the DfT/Cycling England recognise that there are limitations associated with the monitoring process that could significantly impact on the overall monitoring results. Specifically, the following issues may impact on results:

- The manual cycle counts do not always provide a complete cordon around each town centre and therefore may underestimate/overestimate cycling within each town centre.

- The counts of parked bikes were at a limited number of sites and only carried on one day of the year.

- The School Census data is only available for two consecutive years.

It is also important to note that the programmes carried out within the six Cycling Demonstration Towns can be in no way be considered to have transformed conditions for cycling to the point where they are as good as in the most cycle friendly European towns and cities.

The original six towns will now continue to be funded through this second phase of the programme, from 2008-11, to ensure that their initial successes are translated into long term and sustained behaviour change.

1.5 Cycle City & Towns Overview

In June 2008, Cycling England announced Greater Bristol as the UK's first official Cycling City, together with a further 11 Cycling Towns across England. The new city and towns, together with the original six Cycling Demonstration Towns, will be part of a new initiative and benefit from a share of £100m to increase cycling in their areas. Along with Greater Bristol as the Cycling City, the 11 new Cycling Towns are Blackpool, Cambridge, Chester, Colchester, Leighton-Linslade, Shrewsbury, Southend-on-Sea, Southport with Ainsdale, Stoke, Woking and York.

As part of the initiative Cycling England aims to significantly increase cycling within each of the outlined towns. Each town has produced a Work Plan that outlines how the increase investment will be allocated and utilised.

1.6 Case Study: Colchester Cycling Town Centre Project

The wider Colchester area has a population of 155,000 (2001 Census) with approximately 104,000 living within Colchester itself. Colchester has an existing cycle network of on-road facilities, quiet streets and dedicated paths, although the network is incomplete with some barriers to the town centre and other key destinations. The project has a budget of approximately £2.1m over the three year period.

The targets for Colchester’s Cycling Town plan are to:

- Increase the number of people cycling regularly by at least 75% over the initial plan period.
- Increase the mode share of children cycling to targeted schools to 10%.
- Double the number of people travelling to targeted work places by bike.
- Increase the number of people travelling to the town centre by bike by 50%.
- Increase the number of cyclists travelling to the town's three railway stations by 50%.

The aim of Colchester’s Cycling Town programme is to create an improved town with cycling at its heart and facilities of European quality. The priorities for cycle accessibility improvements include:

- The town's railway stations & town centre
- University of Essex,
- Colchester Institute,
- General Hospital
- The identified regeneration areas

1.6.1 Colchester Cycling Town Centre Project – Year 1 (as identified within the Work Plan)

- Infrastructure improvements have so far concentrated on upgrading and refurbishing existing routes in the sector covering northern Colchester, rejuvenating routes between Highwoods and the town centre and North Station.
- Extensively marketing and promoting routes to demonstrate what can be achieved elsewhere in the town.
- Developing designs for facilities which complete broken routes.
- Colchester will introduce Bikeability training and implement a range of measures designed to attract new people, including commuters, students, families and visitors, to cycling.

1.6.2 Colchester Cycling Town Centre Project – Year 2/3 (as identified within the Work Plan)

- Continue with the Smarter Choices programmes, bringing other radial routes up to a quality standard, and introducing missing facilities.
- A number of hubs and sectors have been drawn up to guide implementation and ensure effective delivery through integrating initiatives.
- The development of a number of hubs to guide implementation and ensure effective delivery, these include are Colchester town centre, North Station, and Hythe Station, while the sectors cover Highwoods, Greenstead and Wivenhoe, Garrison and Rowhedge, Bergholt, and Lexden and Shrub End.

1.7 Case Study: Exeter Cycling Town Centre Project

Exeter was part of the initial Cycling Demonstration Town initiative where the initial investment of approximately £1.5m has led to the following:

- Exceeding the target of 19% increase in average daily cycle trips; this reached 25% in 2007.
- 9% of employees are now cycling to work compared to 4% in 2001
- Some schools reporting upwards of 20% of trips by bike on a regular basis.

The town has a population of approximately 115,000 people and between 2008 and 2011 a budget of £3.8m to further develop cycling within the town. Based on the 2007 baseline the programme now aims to achieve:

- 19% increase in average daily cycle trips
- 10% of employees cycling to work in Exeter (last measured at 9% in 2008)
- No increase in the rate of cycling casualties

Infrastructure priorities for the 2008-11 programme include:

- Extending cycle routes out of the town
- Creating secure parking facilities at schools, surgeries and health centres.
- Reviewing and implementing routes, information and facilities for Exeter University and Exeter College, plus a number of train stations.
- This will be complemented by a 'Smarter Choices' programme that will include personalised travel planning, designed to reach 25,000 households; implementation of Bikeability and continuation of Bike It.
- The project aims to sustain investment in cycling for the future. This will be achieved by developing a robust set of policies and procedures for those responsible (e.g. development control teams, planners, maintenance staff and urban designers).
- An area-wide marketing and communications campaign will raise the profile of all elements of the programme among key target audiences, and partnerships are forming with the PCT, the Forestry Commission and other key partners, to ensure integrated delivery.

1.8 Case Study: Lancaster with Morecambe Town Centre Project

Lancaster and Morecambe again formed part of the initial Cycling Demonstration Town programme. The original investment of £1.3m was focussed on expanding the district's cycle route network, in particular new routes were developed for Morecambe and along the Lancaster Canal network. In total an additional 20km of cycle routes were created.

The Work Plan for 2008-2011 has a budget of £2.8m and has the following aims:

- Increase the cycle to work rate to 8% by the 2011 census from a baseline of 4.3%
- 20% increase in cycling rates at 5 key counters from 2005 levels by 2011

The programme aims to achieve these targets by:

- Improving accessibility for cyclists both across and into the City Centre, this is currently problematic due to the one way system within the City Centre.

- Further extend the cycle network where possible, particularly through providing further links to schools and employment areas.

- Cycling will be actively promoted within key workplaces and in schools, where the programme will deliver an integrated programme with Bike It, Bikeability and a pilot bike loan project.

- The Cycling Town team will work collaboratively with the Primary Care Trust and internal services to promote physical activity in the district.

- Alongside this the team will also deliver a comprehensive programme of cycle training for all, including events and rides, publicity and promotion activities, as well as activities focused on increasing participation by women and teenage girls.

1.9 Combined Sustainable Travel Towns & Cycling Towns

Darlington was the only town selected to be both a Cycling Demonstration Town and a Sustainable Travel Demonstration Town. The dual status allowed revenue funding for a programme of smart travel measures that aimed to promote walking, public transport use and cycling and capital funding for the development of its cycling infrastructure. One key advantage due to the dual status in Darlington was that it was easier for safer routes infrastructure to be provided and this provided a significant boost to school travel planning and development. Darlington is now part of the second phase of cycle town development and will receive funding to further develop cycling over a three year period.

A dual status may mean that developments could lean towards a particular mode if not effectively managed. It is important to note however that a broader programme of initiatives with a mix of measures under one common brand is more effective than promoting modes individually. Therefore any sustainable travel/cycling town strategy should operate under a coherent and common identity for greater effect.

1.10 Sources

- *DfT/ Cycling England - Analysis & Sythesis of evidence on the effects of investment in six Cycling Demonstration Towns (2009)*

- *Cycling England - Cycling City & Towns Programme Overview (May 2009)*

- *Cycling England – Lift Off for Cycling (Dec 2009)*

- *Cycling England – Valuing Increased Cycling in the Cycling Demonstration Towns (Dec 2009)*

Appendix 2 Future Year Traffic and Growth Impacts for AM Peak

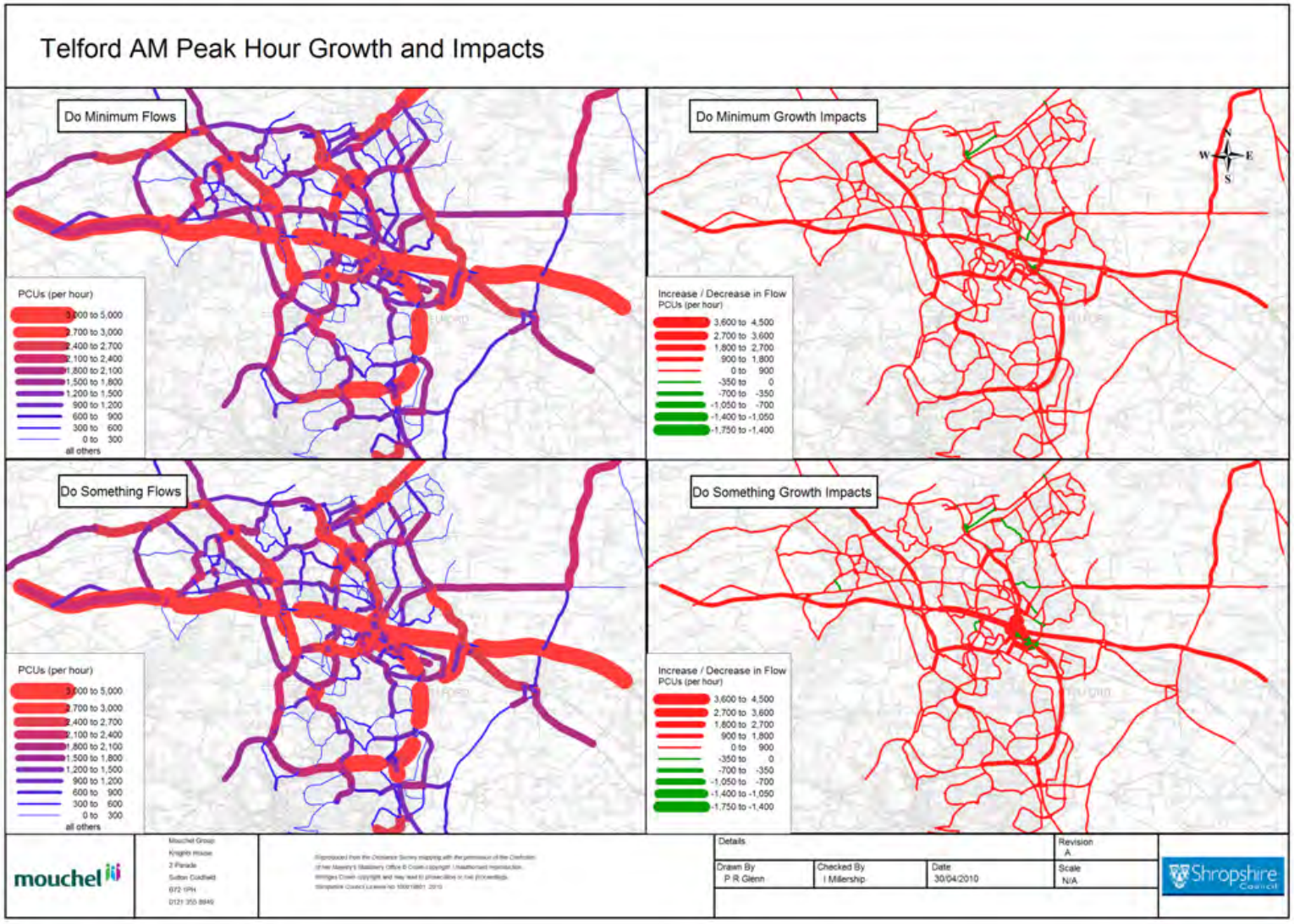

Figure A2-1 Telford Future Year Morning Do Minimum Traffic Flows

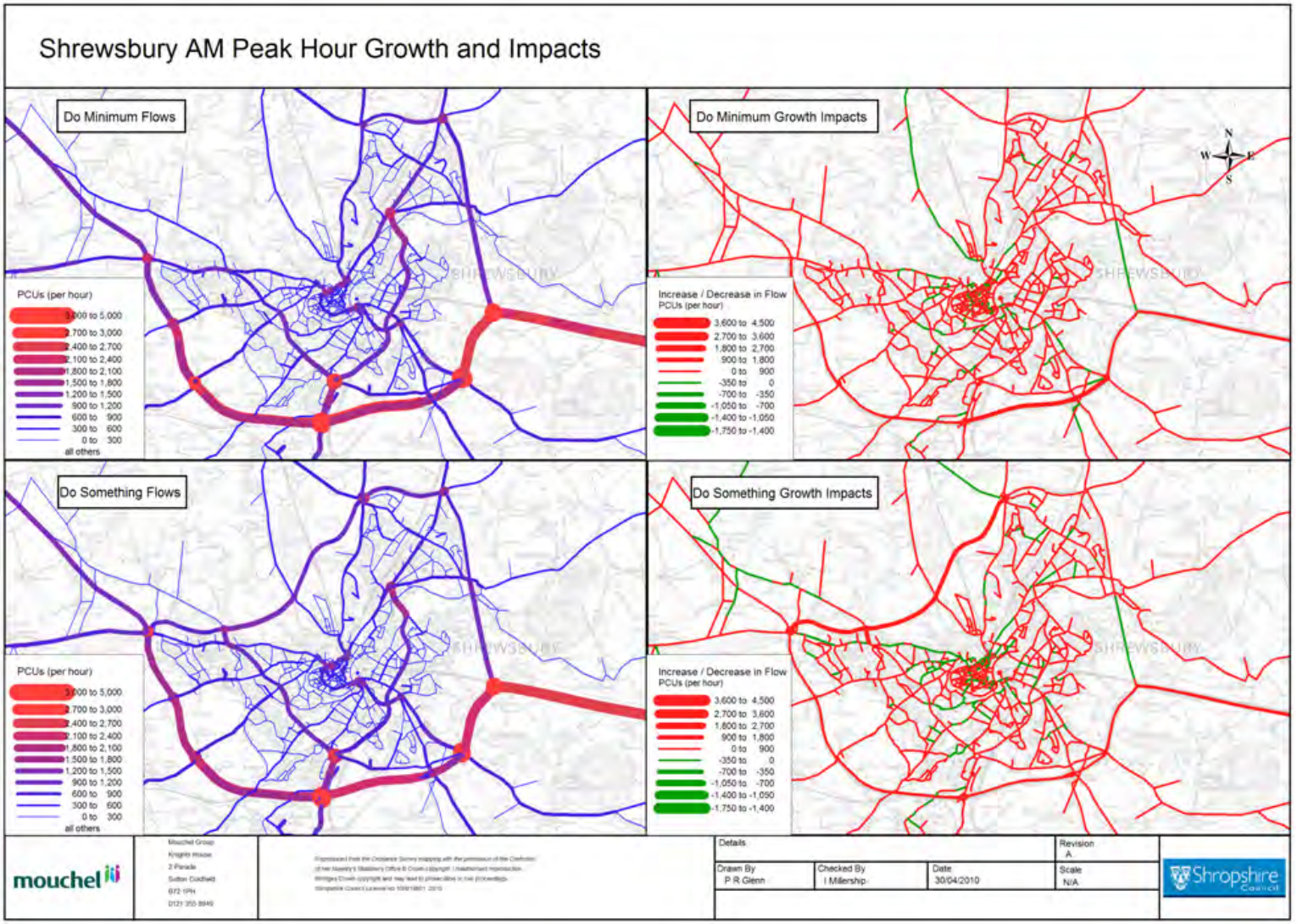

Figure A2-2 Shrewsbury Future Year Morning Do Minimum Traffic Flows

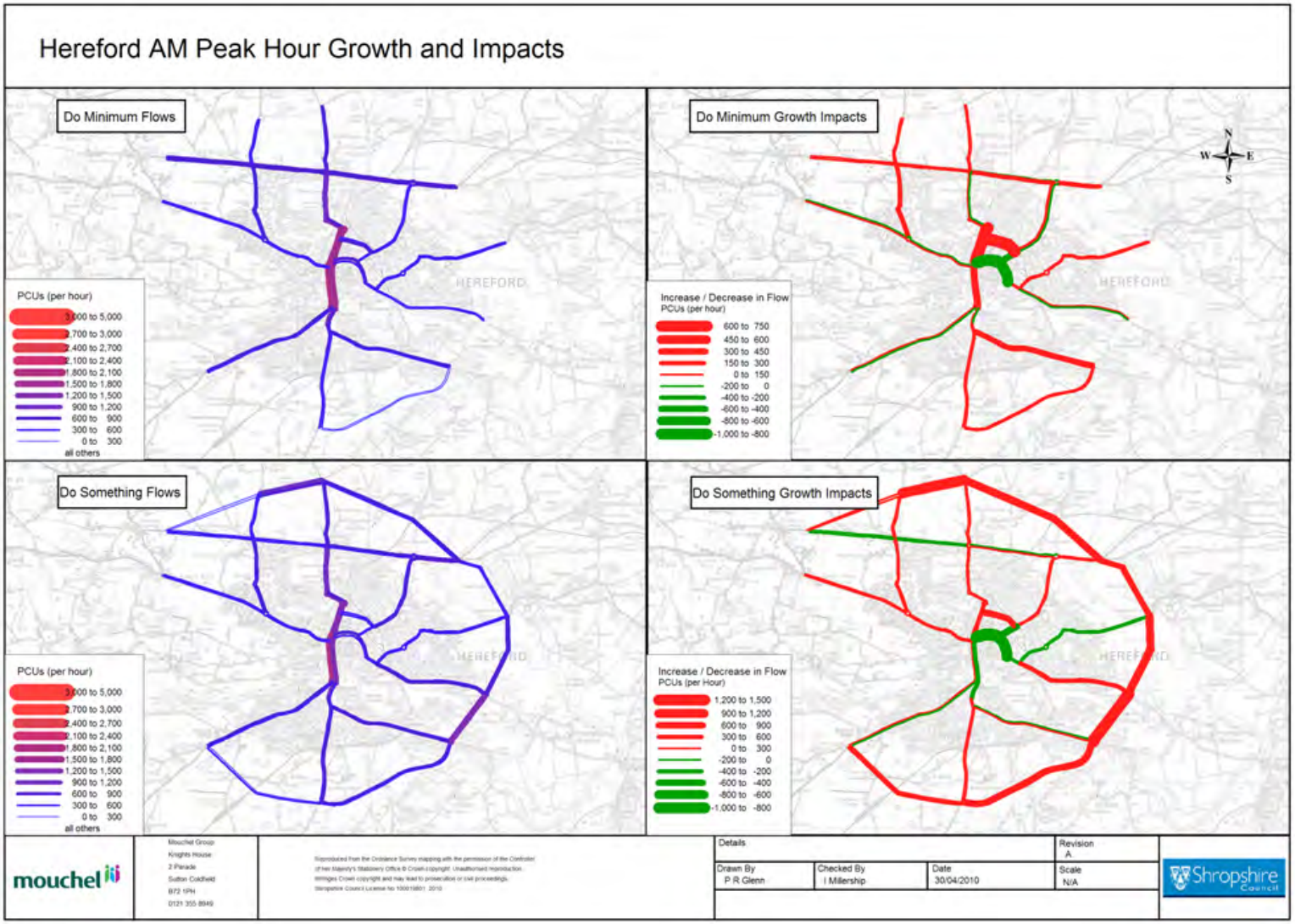

Figure A2-3 Hereford Future Year Morning Do Something Traffic Flows

Appendix 3 Long list of potential interventions

DaSTS Phase 1 - Generic Interventions Explanation

A. Strategic governance, legislative and fiscal measures		
Major Interventions		
	Intervention	**Description, comment or example**
1	Road user charging (cordon) e.g. toll-based charges for crossing cordon point (as per London congestion charging zone)	Charge vehicles for crossing a cordon, as in the London congestion charging zone. Linked to a wide area/town/city centre charging regime
2	Road Pricing based on Vehicle emission Level - e.g. toll-based charges based on vehicle emission rating	As above, but charge levels depending upon the emission rating of the vehicle, using ANPR or other technology to identify vehicles.
3	Bridge and entry gate tolls	Traditional charging model for use on key bridging points e.g. Severn Bridges
4	'Congestion Management' zones	Designation of a town/city centre as a congestion management area where charging is used as part of an area wide strategy to reduce car use/volume specifically at peak times. Can be an element of (1) above using real time technology to activate different levels of traffic restraint
5	Road tolling and 'Pay per mile' in-vehicle metering schemes.	Schemes based on duration of time spent/distance travelled on network as opposed to passing a single toll point
6	Vehicle emission standards and roadside testing	Complements tools such as Low Emission Zones (LEZ) using local control mechanisms and fines to deter use of high emission vehicles on key corridors and/or in town centres. Increases awareness of emission rating of vehicles and deters inappropriate use of certain key routes (e.g. London LEZ)
7	Pay to drive	Widespread application of measures to reduce second car ownership and use - e.g. through 'on-the-spot' easy to use

	schemes/car club	pay as you go car rental with all prices inclusive (as per London StreetCar scheme)
Minor Interventions		
8	Business rates and inward investment subsidies to attract businesses	This is a non-transport measure but can have significant impact on the level of resources available and mode shift within the defined area. For example the use of enhanced rates (as per Business Improvement Districts) can make area wide travel plans viable – e.g. Better Bankside BID, Southwark and Broad Street BID (Birmingham)
9	Housing standards BREEAM/green influence standards	The use of the BRE Environmental Assessment Method (BREEAM) and similar environmental standards will ensure developers include sustainable travel and residential travel plans as an integral part of their scoring process. Evidence of such as an approach includes the Haywards Heath (West Sussex) urban extension which introduced a comprehensive residential travel plan early in the planning process as an essential part of the development and achieved planning permission on its sustainability solutions at inquiry.
10	Provision of affordable housing of quantify/location to meet sustainability objectives	Use of policies within the Local Development Framework/Supplementary Planning Documents/Area Action Plans to ensure that there is an appropriate percentage and mix of affordable homes is distributed in the optimum manner to encourage sustainable travel, potentially supported skills assessment of incoming residents to assess proximity to jobs. Most local authorities are now seeking between 30%-50% affordable housing quotas.
Commentary		
This range of interventions is highly strategic, and is dependent on national level policy and legislative changes. It is included in the DaSTS Phase 1 review process in terms of its 'RAG' scoring, this demonstrates the need for central government support/powers to be put in place to enable a lot of these interventions to take place at a local level. Some measures (such as localised tolls and those secured through the planning process) are deliverable now, but it is important to note that the 'non-transport interventions (8 – 10 above) have quite a potential to influence future development in terms of its adherence to sustainability principles.		

B. Spatial planning policy and sustainable land use measures		
Major Interventions		
	Intervention	**Description, comment or example**
1	Development Control Guidance/Policy for Smarter Choices	Specific policy guidance written at a local level to advocate sustainable transport 'hard' and 'soft' solutions including travel plans. These locally relevant Supplementary Planning Documents should reflect the DfT Travel Plans and the Planning Process Guidance, 2009. Examples include TfL's Workplace and residential travel planning guides, and Liverpool City Council's SPD on 'Ensuring Choice of Travel'. A factsheet detailing best practice from around the UK is available.
2	CIL/interventions and Funding strategies	This intervention develops flexible Capital and Revenue funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value. Examples include the Section 106 package negotiated as part of the South Morton Urban Extension in Carlisle. The Department for Communities and Local Government (CLG) have noted that where a local authority opts for using the Community Infrastructure Levy (CIL), ideally the sustainable transport infrastructure should be identified and funded through CIL, with travel plan , 'soft' and monitoring activities captured by Section 106 mechanisms.
3	Area Action Plans include sustainable travel interventions	Using the formal planning policy process, this intervention uses stated requirements for core sustainable transport infrastructure and area wide travel plans within Area Action Plans (AAPs).
4	Flexibility in implementation of parking standards if smarter travel package is strong	Where the travel plan follows best practice in terms of early negotiation and timing, the local authority allows a reduction in the number of parking spaces provided (no-car or low-car ratios) to enable more efficient use of the site.

Commentary
In order to maximise the potential for new development to take advantage of smarter choices and sustainable transport opportunities, it is vital that these topics are covered within approved spatial planning policy. For example, the key recommendation from the Dft/CLG in relation to the guidelines on Travel Plans and the Planning Process, 2009 is that local authorities should integrate the requirements for travel plans within approved land use policy, such as Supplementary Planning Documents pursuant to the Local Development Framework. Similarly, localised Area Action Plans and car parking policy standards are powerful tools to ensure future development fully takes on board sustainability principles and maximises the opportunity for choices techniques to be effectively used and maintained.

C. Vehicle Technology Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Control of use of commuter/personal trips to lower emission vehicles	Interventions to encourage people to use 'lower – emission' vehicles on trips into town and city centres e.g. using ANPR or other technology to positively encourage use of lower emission vehicles for commuter trips into town centres and/or appealing for those with second cars to use the lower C02 vehicle for urban commuter trips.
2	Lower emission vehicles for business and commercial use	Encouraging use of electric/hybrid and other low carbon vehicles for business travel and for sustainable distribution e.g. TfL electric/hybrid fleet, private companies using Toyota Prius as business fleet etc.
3	Alternative fuel / hydrogen cell	Long term aspiration dependent on trial elsewhere internationally (e.g. California).
4	Alternative power / electric	Already being enabled through development of electric vehicles. Major cities already advancing with electric vehicle charging studies with DfT also looking at partnership processes to achieve this).
5	Increased choice of fuel via petrol station outlets through partnership with local outlets/increased publicity	For example. Development of local maps showing LPG outlets.
6	Provision of electric charging stations - e.g. public charging points and through the planning process	Electric charging points currently being secured through the planning process (e.g. Sainsbury's providing customer charging points as part of their store extensions and new builds.
7	Low emission buses - use of improved design and influence of commercial operators to procure	Use of Quality Bus Partnerships to encourage renewal of fleet and to reduce bus-based emissions particularly in town centres/High Street environments.

	low emission fleets via QBPs	
Minor Interventions		
8	Eco Driving Training Schemes	For example. promotion of national Energy Savings Trust/Carbon Trust programmes. Potential to develop localised scheme/driver awareness for rural based/owner operator businesses – such as part of the North West Herefordshire Freight Strategy.
9	Vehicle fuel adaptation grants - as above with top-up from local sources	Improvements to engine efficiency and emission based on adaptation of existing vehicles. Use of national fuel adaptation grants with option for the local authority to provide additional funding towards 'greening fleet; - potentially linked to economic development.
10	Alternative fuel / LPG e.g. local grant schemes on top of any central government scheme to promote use of vehicles	Use of national grants with the option for local authorities to purchase new vehicles that run on alternative fuels (e.g. electric delivery vans etc).
Commentary		
Similar to the inventions listed in Category (A), this family of measures rely on national level programmes and central government in terms of moving forward the alternative fuel/charming agenda. Whilst manufacturers are heavily involved in this process, this is a national-level investment programme as opposed a local scheme. However, decisions around the policy on electric charging points in new development, local top up grants, training etc are decisions that can be taken more locally.		

D. Strategic Smarter Choices interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments	Use of individualised marketing programmes working with either household units or individuals to identify and match suitable interventions that will result in reduced single occupancy car use. Methods have been tested in the UK over the last 10+ years with first national trial carried out by Sustrans in Quedgeley, Gloucester. Now an integral part of the Sustainable Travel Towns and Cycling Demonstration Towns programmes as well as 'stand-alone' PTP activities (e.g. Merseyside, West Midlands. TravelSmart Sutton and Richmond etc). There are a number of tested methods used from a 'blanket' approach (e.g. Sustrans' TravelSmart) to more site/segment specific interventions.
2	Wide Area Travel Plans	These are usually mixed use, commercial and industry/business park travel plans which are based around a critical mass of activity. The Highways Agency have a number of demonstration sites as part of their national Influencing Travel Behaviour (ITB) programme which have now been evaluated giving a Benefit to cost Ratio (BCR) of between 4:1 to 13:1 in some locations. Hereford already has a wide area travel plan in the form of the Rotherwas employment area which is set for further expansion. The other West Midlands towns have scope for adopting this tool.
3	Corridor Smarter Choices Tools -	This intervention involves clustering smarter travel interventions along a given corridor in order to target traffic reduction (covering residential, school, workplace travel plans, cycle promotion, safer routes to school etc). The prime focus is to target single occupancy car trips through intensive smarter choices work. An example of this is the Haywards Heath urban extension appeal where the developer focused the bulk of interventions on those trips/markets that would use the main A272 into the town centre in the morning peak.
4	Sustainable Travel Town 'blanket'	This strategic intervention applies the DfT's Sustainable Travel Towns model – based on a town-wide series of

	approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes	interventions. As analysed in detail elsewhere in the DaSTS report, no two towns are the same, with the 'lead' interventions being quite different dependent on local circumstances. An extension of the Sustainable Travel Towns approach (which tends to be more revenue-based than the Cycling Towns) a major schemes business cases for sustainable transport could be developed (as per the Ipswich Sustainable Transport Major Scheme Business Case model currently lodged with DfT).
5	Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc	This set of interventions would normally be led by the Primary Care Trust (PCT) in partnership with the local authority, and will focus on health improvement and well-being as the main drivers for behavioural change.

Commentary

There is now strong evidence in place from the three Sustainable Travel Towns that the 'blanket' approach to sustainable travel can work very effectively, with an average BCR of 4.5:1 achieved. Whilst many of the activities tend to be more revenue driven, overall they are inexpensive compared to major infrastructure schemes and provide a very good return on investment.

PTP has been successfully implemented in a number of UK towns and cities as a 'stand-alone' activity not necessarily linked to a Sustainable Travel Town approach. The approach has also been used in medium sized towns (e.g. Falkirk) as well as city locations which demonstrates its suitability for the West Midlands growth towns.

The key factor to take into account when adopting this approach is to choose a method which is appropriate for the town's size and culture. Therefore if PTP interventions are adopted in the three growth towns, then they may need to be very different in application, focusing on specific/locations or markets depending on the nature of local issues and drivers.

Effective partnership working is a prerequisite to a successful scheme and it is noted that all three West Midlands towns have formed some level of partnership with the health sector, although the strongest focus to date appears to be in Telford.

E. Travel Plan interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Business Stakeholder Engagement/Advice/Travel Plan 'Forums'/'Transport Management Associations' & Business Improvement Zones	The common links between these interventions is the development and fostering of long-term commitment from the business sector. This can be secured either through the planning process (using condition/Section 106 routeways) or through voluntary programmes. These all secure longer term management of travel plans but do rely on local authority resources to continue to build and develop relationships.
2	Planning-led travel plans including enforcement regime	This intervention relates to the different types of travel plans that can now be secured through the planning process (i.e. framework, interim, detailed etc) and will normally be linked to Section 106 agreement to allow for flexibility and enforceability.
3	Workplaces/Hospitals/Universities/HE Sector travel plans	This group of travel plans relate to the employment/workplace sector and includes higher education because of the large number of staff these sites tend to generate. Parking for staff is often a particular issue for the university and health sector.
4	Schools and Colleges Travel Plans	This relates to the Department for Schools Children and Families (DSCF) 'family of school travel plans (i.e. primary/secondary/sixth form) and also FE colleges.

5	Residential Travel Plans	This relates to travel plans for housing schemes (normally major applications) consisting of private sector, shared equity and/or RSL (Registered Social Landlord) provision. Applying to both brownfield and greenfield sites, increasingly this intervention is being used for smaller sites where the role of the travel plan is to manage down car parking and lock the site into the sustainable transport connections in the area. The use of 'trip banking' (i.e. applying travel plan benefits to the wider community or earlier phases of the development) is now a tested technique (refer to Haywards Heath public inquiry and South Morton urban extension).
6	Retail/tourism/sports/concert attractors Travel Plans	This intervention includes travel plans for retail parks, stand alone supermarkets (e.g. Tesco, Asda) and site specific solutions for 'event' trip attractors such as football stadia, leisure centres, racecourses etc.
7	Rail Station Travel Plans	This intervention focuses on reducing single occupancy car use to key railway stations, enabling greater footfall and increased patronage. Linked to parking management strategies for the stations this STP tool tackles both peak and off-peak travel. The first wave of ATOC (Association of Train Operating Companies) pilots was undertaken in 2008 with full evaluation due in 2011. Since then the DfT have weaved in Station Travel Plan requirement into new franchise arrangements, the most recent being the Southern network with a requirement for 30 station travel plans to be developed.
8	Developing/promoting a car sharing scheme inc emergency lift home for car sharers	This intervention can either operate at high level (e.g. using an existing product such as www.liftshare.com) or can be bespoked to suite a specific location or town.

9	Charging staff to park/forcing to use public car parking due to demand management and space limitation/regulation	This intervention is used where car parking capacity is at a premium consideration and the local authority require ways to reduce season ticket and staff car parking to give way to shoppers and visitors. This is usually linked to the development of the local authority's own travel plan first where rationalisation of staff parking sets the pace for other employers to follow.
Minor Interventions		
10	Flexitime-working e.g. staggered hours, alterations to roster timebands, full flexitime with limited core hours	This covers both 'complete' flexitime arrangements (i.e. where core hours are very limited) and staggered start/roster arrangements. This intervention requires the employee to be at their main place of work but with flexibility on timings of arrival and departure This is different from 'flexible working' which relates to the ability to work from home, use of 'touchdown' locations/other offices etc.
11	Home working e.g. approved homeworker policies, ability for employees to 'mix and match' with time at workbase	This intervention allows the employee to work from home for all or part of their working week. This also covers self-employed/SME operations which are based from home and the opportunity for more of these businesses to be developed.
12	Tele-working and conferencing	Use of audio telephoning systems which allows people to group communicate from any location.
13	Video-conferencing	Fixed location provision where employees still need to travel to a Video Conference equipped office. There is an option for business parks to have a shared facility on site, either as part of the management suite or as part of 'Basepoint' style incubator units.
14	Introducing employer Hot-desk policy e.g. reduction of desk capacity and operational footprint and reduction in car parking spaces	Internal policy which is driven by the individual employer; local authorities are specifically taking the lead in terms of operational efficiencies and reducing the number of properties and associated car parking spaces they need to own/lease/maintain.

15	Providing a car club/pool car facility - including use of residential car clubs to provide pool cars during the day for business	Development of car clubs that are designed to be multi-functional; used by businesses mainly during the day and by local residents at weekends and in the evenings. Woking Borough Council's new car club (March 2010) has been set up as a public car club scheme and to service local businesses that may not want to invest in their own car fleet/pool cars. Also secured through the planning process (e.g. Hailsham Mill redevelopment has developed a flexible car club for incubator units and residential use with the option for expansion to the town and Priddys Hard regeneration scheme (Gosport) put in place a car club for apartment residents and for the waterside commercial/leisure and employment area.
16	Minibus/Maxi Taxi and Taxi Budi Schemes e.g. use of people carriers and taxis for 2-14/15 employees to share costs	This intervention is used when the location/number of people does not make diversion of a commercial bus service/subsidised bus service viable. It also lends itself to catering for those working antisocial hours (e.g. clearing and facilities staff etc) and those for whom use of conventional bus services is not attractive/viable (e.g. business commuters accessing rail stations).
17	Grants/loans to develop on-site facilities e.g. cycle parking, showers etc	These grants are normally conditional on workplace and school travel plans being developed to ensure that the capital investment is well used. Grants typically range for £1k - £5k depending on size of site and local needs.
18	Employer low or no-cost ticket loan schemes e.g. Carnets, reduced commercial rates bus and rail	The local authority normally operates a brokerage service to negotiate discounts on behalf of major employers, particularly where good quality data is available as a result of comprehensive travel surveys. This means that in addition to any subsidy awarded by the employer, the commercial operator is expected to provide matching discounts' on the basis of cross-selling of their tickets. A good example of the Company Travelwise scheme in the West Midlands that can offer to 50% discount on Centro passes.

19	Vanpooling for business operations e.g. shared vans across a smaller industrial estate or 'incubator' centre	Currently limited in application but with the advent of electric vehicle charging this will lend itself to demonstrator projects whereby small scale delivery operations can be supported by a localised fleet
20	Progressive lease-car, business mileage allowance rates and HMRC limits	Local authorities are taking the lead in developing the most cost effective business travel mechanisms.

Commentary

This is a comprehensive set of measures based around travel planning on an area-wide, corridor of site-specific basis. A key decision for each of the growth towns will be whether the investment in travel planning should be equally spread between the existing businesses/housing areas and other trip generators/attractors, and sites whether travel plans are secured through the planning process.

If it is decided that more influence/control and performance to targets can be secured through the planning process, then the emphasis will need to shift onto the future developments and securing effective travel plans through the planning process (as per Interventions List B)

Given the number of tools available again careful selection of which of these measures are the most valuable in terms of mode shift and travel reduction will be different for each town – as set out in the RAG assessment matrices.

F. Promotion & Marketing interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Liftshare Day, branding etc	These events are normally linked into a national theme or event, but carried out in a locally relevant manner. The benefit of joining in with an established national event is the cost savings on branding and publicity material. Most local authorities tend to be selective in which they promote due to staff resources and the nature of the audience. Localised branding such as 'LocalMotion' (Darlington Sustainable Travel Town) can also be created.
2	Business carbon assessment	This involves free advice to businesses to calculate their carbon footprint. Some of the assessment tools available on line, but this approach tends to work best combined with face to face businesses consultations. Organisations such as the Energy Savings Trust, the Carbon Trust and the London Green 500 provide such help and advice.
3	Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information	These campaigns are based on modal choice (e.g. cycling, walking etc) or around a key 'angle' e.g. 'Look after your Heart'.
4	Area wide health promotion interventions including wellbeing, obesity and air quality issues	The issue of travel choice is embedded within a wider health and wellbeing message. The health campaign may be targeted to reach certain age bands, or to deal with certain condition risks (e.g. heart disease, weight, asthma etc).
5	Green Branding to match culture of town / Lifestyle marketing e.g. targeted at residents who value historic/conservation aspects of the	This intervention picks up on town that may have a strong or evolving 'eco-culture' that is particularly strong and therefore environmental awareness is more likely to activate changes

	town	in travel behaviour.
Minor Interventions		
6	Promotional information including timetables, maps literature, booklets, webpages, newsletters, noticeboards etc	This covers 'traditional' methods of providing information but will be need to be linked to more strategic smarter choices measures to be fully effective. Of particular benefit are town maps showing walking/cycling routes.
7	Personalised Travel Plans and Individualised Information for households or employees (support material)	PTP programmes can be run for whole towns or for a discrete target element. They can also be adapted to encourage participation at other locations such as football clubs and workplaces.
8	Personal Travel Carbon Calculator promotion of existing web-based resources to appeal to 'environmental ethical' target market which is growing	This is normally a web-based application which people use for their 'own interest'.
9	Longer Term Marketing Strategy including communications plan	This intervention relates to a clear local authority communications and marketing strategy for sustainable transport, as opposed to adopting an opportunist approach to marketing which tends to focus on a series of disparate events.
Commentary		

It should be noted that the bulk of the above will be 'revenue-hungry' and whilst very affordable in terms of total cost, limitations on revenue spend will result in key promotional activity being 'threatened'. Whilst research has shown that one-off 'one day' events tends not to produce longer term modal shift, there is a clear role for sustained marketing/branded campaigns (as evidenced by the three sustainable travel town promotion programmes).

Development and monitoring of a successful promotional workstreams will depend on active engagement and partnering with other organisations, particularly the PCTs.

From wider evaluation work and from feedback on the three West Midlands growth towns, production of a clear and easy to use map (showing public transport, walking and cycling routes etc) has emerged as the core must have' product as it opens up doors for other opportunities to promote sustainable travel.

G. Walking interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Improving pedestrian routes and connections - e.g. lighting, DDA, crossing points etc	This intervention relates to the development of Disability Discrimination Act compliant routes which are fully accessible, safe and easy to use.
2	Walking buses for schools	Organised groups of schoolchildren who join a designated 'Walking route'. Normally resourced by local volunteers.
3	Green Infrastructure links/short cuts (covering Footpaths/Bridleways/PROW/RUPPs/permissive routes/desire lines/alleys investment)	Every local authority has to produce a Green Infrastructure Strategy which will include reference to public rights of way and other types of footpath link. These fall into three main categories, rural routes, urban fringe/rural linkages, and urban based short cut routes.
4	Aggressive use of Manual for Streets user hierarchy to make streets more pedestrian friendly including play streets, school zones, quiet lanes, woonerven/home zones, shared space etc	This intervention is based around the application of Manual for Streets in a more proactive manner to positively favour 'people-friendly' streets.
5	Local traffic management/estate layouts that encourage active travel through directness and connectivity	This is normally secured through design guides and the planning process and seeks to give advantage to pedestrians by providing short-cuts and direct links.
6	Street design (surfaces, widths, pinch points, chicanes and vertical features) to discourage vehicles or slow them	This intervention group covers all the various street design tools availed to reduce traffic or slow it

		down.
Minor Interventions		
7	Pedestrian route map	Can either be produced as a walking route map or specifically include reference to DDA-standard routes.
8	Walking support measures e.g. personal alarms/loan umbrellas, promotion of active travel, walking buddy schemes	Normally an ancillary measure which is supported through a travel plan – used a marketing ploy.
9	On site infrastructure improvements (showers/changing etc) inc DDA	Covers items such as cycle parking, showers, washing and drying facilities, clothes and equipment storage etc.
10	Pedestrian signage renewal and replacement - including improved legibility code	Signage infrastructure including bespoke signage system (e.g. Legible London, Bristol's Legible City' initiative).

Commentary

There are considerable opportunities to enhance walking networks through strong partnership working across local authorities. Early engagement of professionals in traffic management, safer routes to school, public transport green infrastructure/open spaces and public rights of way will help ensure that the capital investment programmes that will benefit pedestrians and are well thought through and integrated.

It is also important to note those activities that the local authority has a duty towards, including meeting the requirements of the Disability Discrimination Act (195 as updated 2005) and the Disability Equality Duty in relation to designing and implementing accessible highways and public realm schemes.

The level to which Manual for Streets and its 'pro-people' principles is also a key strategy decision for each local authority to consider and embed in future scheme proposals. The production of clear pedestrian mapping is also considered a core requirement in order to promote sustainable travel.

H. Cycle Access Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Cycle route network improvement - including lighting/crossings and routes provided/improved to appropriate Bikeability standards/Safer Routes	Graded improvement of key cycle routes based on the level of competence/confidence of cyclists expected to use them.
2	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling	Application of the Cycling Towns approach advocated by DfT into other target locations. Note that the actual mix of measures for each town will be different, and that this is a longer term measure designed to generate new cycling trips. Reference sites include Shrewsbury.
3	Innovative signage (e.g. cycle responsive 'Think Bike')	This would involve the development of measures such as variable message signs which highlight 'Think Bike' when sensor detect cyclists at a roundabout/junction
4	Cycle route map	Production of a simple, easy to use cycle map showing key on-road routes, quiet routes, cycle parking, strategic leisure routes etc.
Minor Interventions		
5	Staff discounts equipment and purchase for bikes e.g. supporting local independent traders - cycle2work etc	This intervention is normally run through the cycle2 work scheme although local authorities may develop their own localised scheme.

6	Promoting cycling as a healthy way to travel inc cycle buddy and other support measures	This intervention is based on health and wellbeing promotional information which focuses on the health attributes of cycling.This can be linked to Liftshare's 'cyclebudi' and other support schemes.
7	On-site infrastructure improvements including secure cycle parking	This relates to onsite parking, locker storage and other support infrastructure provided within the operational limits of a school, workplace etc.
8	Public cycle hire (on-street) e.g. for occasional local users and for tourists/visitors	This relates to the provision of 'pay-as-you-go' cycle hire which can either be operated by a dedicated provider (e.g. Oybike, Hourbike, ClearChannel etc) or more informally through existing bike shops/leisure hire operators.
9	Cycle Trains for schools	This intervention is similar to walking bus, designed specially to target novice and less experienced cyclists to start cycling with other more confident pupils. Roadcraft training and training for cycletrain volunteer leaders (e.g. parents etc) is an integral part of this intervention.

Commentary

The interim evaluation results from the existing Cycle Demonstration Towns are positive, showing that there has been an uptake of cycling in these towns. A key benefit of the CDT approach is that the bulk of spend is infrastructure-led and therefore commands a much higher proportion of capital spend than the Sustainable Travel Towns.

Therefore those authorities that may struggle to justify a 'pure' sustainable travel town approach based on personalised travel planning and other softer measures, may be able to achieve the same outcome by assembling a package based more on walking and cycling infrastructure, but with 'softer measures' in place.

Note that is important that any infrastructure-led programme does allow enough funding for promotion/marketing, training and other 'coaching' activities. This is to ensure that the use of new infrastructure is optimised and the fallacy of 'if we build it they will come' is addressed.

I. Public Transport Bus Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Bus priority schemes including corridor and location measures (bus gates)	Linear bus route improvements such as bus lanes, and shared Bus/Cycle/Motorcycle lanes. Also includes 'advantage' measures such as bus gate, advance signals, transponder activated bollards etc.
2	Bus rail integration e.g.. physical interchange improvements, improved routing, better connections timings	This covers infrastructure measures such as new and improved bus/rail interchange including forecourt drop off, DDA compliant pedestrian access, direct connections to rail station
3	Improving accessibility to key locations by bus	Routing of bus services to connect key origins and destinations, and identification of ways in which better penetration into residential areas can be achieved.
4	Providing/ improving bus waiting facilities	New shelters (sponsored or otherwise), bus boarder platforms, surfaced waiting areas, dropped kerbs to enable crossing of roads between stops.
5	Bus stations - new/improved	This intervention covers circulation/parking/loading/.unloading improvements, cosmetic enhancements, passenger waiting area improvements etc through to new bus station provision.
6	Real-time bus information	RTPI displays at stops linked to GPS positioning of buses.
7	Better quality buses (tram style)	Introduction of better quality stock with high standard internal specification.

8	Rapid Transit (dedicated or shared space)	Bus Rapid Transit that can run on guideway (for example, Cambridge – St Ives guided busway), off-road sections (for example Kesgrave, Ipswich) and shared space routes.
9	Simplification of operations within the town e.g. managing impact of multioperator regimes and competition	This intervention consists of an overall review of operations including routing, boarding locations in town centres, analysis of timing and rationalisation of operator services.
10	Recast bus network- Introduce cross town bus services and higher frequencies	This intervention reviews the entire network and looks at demand for cross town as opposed to radial services into the town centre where changing buses can often be a deterrent to public transport use.
Minor Interventions		
11	Web and Phone Travel Info Services e.g. 'Traveline' and 'Transport Direct'	This intervention covers signposting of users to national sites and well as provision of more localised resources that may be run by the highway authority.
12	Public Transport Concessions/discounted fares	Provision of concessionary fares to those 60+, 16-18 years and other key sectors.
13	Inter-operator and Plus Bus ticket schemes (inc Smart Ticketing)	The setting up of arrangements to enable interoperability across networks (for example the Oyster card). This ranges from straightforward PlusBus services to complete smartcard operations.
14	'Quality Route' schemes and QBP	The setting up of an integrated partnership between the local authority bus operators and other stakeholders whereby route standards and infrastructure can be enhanced through joint action and

		commitment.
15	Demand Responsive Services	This covers DRT of all types, ranging from provision of 'works buses' which pick up commuters according to demand, through to flexible scheduled public transport services.
16	Bus revenue support and fuel duty rebates	Ongoing financial support from the local authority to underwrite socially necessary services; also covers central government interventions around fuel duty.
17	Community, 'dial-a-ride' and works- bus services	Community based bus services which rely on voluntary sector/partnership working. This covers typical Dial-A-Ride services which tend to cater for elderly and disabled customers through to contract transport run by employers (as exemplified by works buses to Telford from Wolverhampton/Birmingham and Boots, Nottingham)

Commentary

These interventions cover a wide range of bus-based measures and again it will be important for a local authority to be selective in their application. The group of measures covers particularly well the breadth of the DasTS goals, from commercial bus operations that support key commuter routes (economic activity) through to subsidised and community transport operations (equality and social inclusion).

Delivery of top up funding through developer revenue and government schemes such as KickStart will also be important here.

Overall feedback from the West Midlands towns is that bus frequency, routing, journey time and punctuality are more important than the actual type/age of vehicle that is being provided.

J. Rail Interventions		
Major Interventions		
1	Rail station upgrades and customer waiting improvement	This relates to the physical upgrading of rail stations covering DDA improvements, customer waiting area enhancements, improved ticket hall areas etc.
2	New rail station to meet local demand and projected growth	This refers to creation of a brand new town suburban or Parkway station to meet forecast growth in patronage – either secured through effective travel planning or new growth population.
3	Promotion of new/adjusted services	This covers adjustment to the timetable to facilitate an increase in patronage levels.
4	Rail station travel plan	Development of station travel plans to reduce the level of single occupancy car use to local rail stations; also designed to increase level of patronage without increasing parking provision. ATOC pilot programme carried out 2008-2011 with increased requirement for STPs now set out in new franchise bids.
Minor Interventions		
5	Providing rail discounts	This intervention covers the generation of commercial discounts through consultation between the local authority and the train operating company.
6	Improving rail passenger capacity in peak	Normally entails the introduction of new /longer trains with potential for platform lengthening and improved signalling.

7	Inter-operator and 'OysterCard' schemes (Plus Bus)	Integration of bus and rail timetabling and ticketing through a single payment method.

Commentary

The rail interventions span across major infrastructure schemes (i.e. new stations) through to cheaper, easier wins such as station travel plans.

Rail connectivity is important to all three West Midlands towns for different reasons (tourism, access to jobs etc) and therefore there will be relatively 'quick wins' that can be delivered, linked to the station travel plan tool and the introduction of more minor interventions that underpin this key measure.

From the outputs of the ATOC station travel pilot study (2009) we know that stations such as Hereford, Shrewsbury and Telford stations are more than capable of justifying such an investment programme; particularly as the Telford stations applied to be in the first round of ATOC pilots.

K. Park and Ride Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Providing improved journey times from park and ride to town centre	Signalisation/UTMC/pinchpoint improvements on the road corridor (e.g. bus lane) to enable park and ride buses to access the town centre faster.
2	Park and ride to central locations (i.e. town centre)	Specific park and ride service to cater for town centre shopping, leisure and employment provision.
3	Corridor infrastructure measures to give greater bus priority e.g. bus lanes, bus gates etc	Linear improvements to encourage park and ride bus use including lanes, advance signals etc
Minor Interventions		
4	Park and ride to non-central locations (e.g. hospitals)	Use of park and ride tool to suburban and urban fringe locations for example Royal Shrewsbury Hospital
5	Providing information and publicity	Mapping and timetable information
6	Park and Cycle - e.g. ability to park and make onward cycle trip and/or cycle to the PandR and use secure cycle parking. Includes ability to leave own bike in secure storage overnight	The sanctioning of the park and ride site for the explicit use of a % of spaces for 'park and cycle' together with the option for cycle hire or storing own bike. Also option to cycle to the park and ride site and be able to store bicycles securely all day.
7	Park and Taxi e.g. to non-central locations	Use of local taxi services to take groups of people from the park and ride to key locations not served by the main bus.
8	Park and Share - e.g. parking and car share for longer distance journeys and/or to non-central locations	Use of park and ride parking spaces for 'out-commuting' and longer distance trips (e.g. to employment locations in Birmingham , Bull Ring shopping centre etc)

Commentary

The use of park and ride to support constrained towns, based on a clear arterial road structure, is evidenced through towns such as Cambridge, Oxford, Bath, and Shrewsbury

In order for park and ride strategies to work well in these tight locations relies on multiple choice locations so that diversion to park and ride does not produce a time deterrent which is unacceptable to the motorist. Examination of 'partial' park and ride services such as Cheltenham (A40 east Arle Court and Racecourse North) and Gloucester (Waterwells A38 south and St Oswald's retail Park, close to the city centre) reveal that the market catchment for park and ride is reduced, and that access by car on certain corridors remains dominant.

The role of park and ride will require special consideration in Hereford, as based on its radial nature the city could lend itself to multiple sites. However, at present the scale of the city means that the distance into the city centre is less than 2 miles from any direction, and therefore in its present urban form, there is a strong temptation to motorists to carry on to their final destination. Park and ride strategies for Hereford also need to address the key issue of the Wye river crossing on the A49, and the cooperatively high proportion of local traffic that is using the bridge to access employment and school locations.

For Telford, the car-friendly layout of the town and the relative lack of congestion means that park and ride is not a strong option, but better bus penetration into residential areas is a compensatory measure which needs to be assessed.

L. Intelligent Transport Systems Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Bus, cycle & HOV lanes	On-carriageway interventions which can be one or a combination of the lane types.
2	Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight	Use of technology to manage the overall network and use space more efficiently.
3	Real Time Passenger Information	Use of RTPI for both bus and rail passenger information.
4	Area Traffic Management (zone based)	Application of traffic management measures over a defined geographic area (e.g. home zones, 20mph zones).
5	Active Traffic Management (radial/corridor based)	As above but focused on specific arteries and corridor rather than a zone.
6	Car Parking - intelligent signing and waymarking to reduce unnecessary circulation in the town centre system and to encourage filtration off at P and R sites	This can be static signage, manually adjustable signage or VMS/real time based.
7	Traffic Reduction by time of day or congestion level (e.g. 'ramp access' and 'access control' techniques)	This intervention relates specifically to demand management control as introduced by the Highways Agency to limit the amount of traffic entering or leaving a development within peak periods and within a pre-agreed total numbed of trips. This is in line with the demand management approached advocated in Circular 2/07 on Planning and the Strategic Road Network.
8	Traffic Reduction by	Adaptation of the above to take account of the vehicle 'unit' so that those with better carbon emissions levels

	vehicle type, size, weight	are favoured.

Commentary

The use of ITS/technology applications to demand manage existing traffic levels, without relying on physical capacity improvements is a particularly strong intervention. Supported by the Highways Agency through their policies on journey time reliability, erosion of delay time and customer satisfaction, there is scope for application of ITS-based techniques in all three growth towns.

The key issue to tackle is whether this should be limited to the town centres and/or be arterial based. Depending on the type of approach, traffic flow and speed will be better managed, and/or modal shift will take place because of intelligent real time information flow to motorists.

Clearly for the radial approach this requires alternatives (such as park and ride sites) and for the town centre strategy this requires smart information on car parking capacity and location on a real time basis.

There is also scope to work proactively with utility providers to use delays caused by roadworks to enact modal change for a temporary period, which may then enable some motorists to adopt permanent modal shift. Leeds City Council have trialled such an approach using temporary VMS signing to encourage use of public transport and car sharing as part of longer term corridor roadworks.

M. Parking Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Public Parking Control and Enforcement/Reduction in public parking provision	This covers the introduction of parking restrictions, TROs and parking warden control.
2	Improved Car Parking Signage and Advance VMS Systems (inc strategic road network)	Use of real time VMS to ensure that no traffic is 'unnecessarily'' circulating on the network. This also includes advance warning and directional RTPI signage on the approaches to key HA junction, both on local authority and the Agency's roads.
3	Workplace Parking Levy	Implementation of a levy on workplace parking normally factored the number of parking spaces. Examples of this nationally include Nottingham.
4	Parking priority/charges related to type, weight or emission standards of vehicle.	The banding of public parking venires according to vehicle emissions – as per London Borough of Richmond upon Thames and Woking Borough Council.
5	De-criminalised Parking Enforcement.	Transferring parking enforcement powers from the local police to the local authority.
6	Parking bans in town centres/access entry control	Use of access restraint tools and severe parking restrictions to limit car use in town centres.
7	Wholesale or partial (e.g. 'Residents only') parking bans	Residents Parking Schemes, parking bans outside schools.
8	'Tow-away zones'	Key routes (e.g. red routes) where particularly action will need to be taken to keep traffic moving and parking restraint needs to be rigidly enforced (e.g. London red routes, Birmingham Showcase bus routes)

9	'Red Routes' and 'ClearWays'	Designation of strategic highway routes where no corridor parking will be allowed.
Minor Interventions		
10	Reducing Workplace Parking Provision/Charging at Workplace/Permit Systems - including cash out options for employees to give up parking spaces	Normally introduced in association with workplace travel pans, this reduces the overall costs of parking stock associated with workplace parking, particular where this is flexible/leased.
11	Car Sharing Parking Zones at Workplace	Use of various mechanisms to encourage car sharing through visible measures i.e. marking out '2+' bays, barriered area, manned entry, 'green cone' scheme to mark out bays according to demand reinforced through the travel plan.
12	Review Essential / Occasional Car user allowances e.g. public sector employers leading by example	Carried out as part of major business travel review processes - often to bring allowances in party with HMRC guidelines.
13	Flexible parking (mobility spaces) e.g. using Blue Badge and Parent and Toddler parking as a shared resource with ability to 'toggle' between each category through disc displays	This intervention involves the designation of 'mobility' spaces which can operate as preferential parking for disabled and/or parent and toddler parking. This is to avoid the problem of overcommitment of Blue Badge parking (i.e. on pension days, mid week) and parent/child space overcommtiments on evenings/weekends. The spaces can be allocated according to local demand on a flexible basis.
14	Quick (and safe) drop off / pick up parking spaces inc short stay spaces for employees at workplace	Allocation of specific bays/drop off points for employers to be dropped off by other car sharers.
15	Car parking standards in Dev Control / PNRP restrictions	Use of parking control standard as a maximum (not a minimum) with a proactive approach to reduce overall parking provision.
16	Local on-street charging	Reduction in commuter 'park and walk' parking

	policy	through on street charging.
17	Local parking/waiting/loading restrictions	Use of Traffic Regulation Orders to achieve the same objective i.e. rationing parking supply and reducing the risk of overspill parking into residential areas close to town centre/hospital.
18	HGV parking bans	Use of traffic orders and physical claming measures to avoid short-cuts and 'stack back' parking by HGVs in sensitive areas.

Commentary

Again the range of interventions is extensive and depends upon how 'hard' the local authority wishes to be in its parking control and charging regimes.

It is clear from the baseline research and the RAG assessment process that the three West Midlands growth towns will require a different approach to parking based on the technical and political landscape for each of the towns. For any sustainable travel strategy to be complete does require a 'stick' element of which parking will be core. However the level, scale and type of parking intervention can be tailored to suit the commercial, tourism and cultural issues surrounding the specific town, and enable a bespoke parking strategy to be delivered.

There must also be consistency in application of policy, and the way in which development control parking standards, on/off street charging levels, enforcement and control of parking supply all interact must mutually support each other. Examples such as Bristol City Council show how this balance has been achieved, with authorities such as the London Borough of Richmond moving forward with innovative parking regimes based on emission levels. Authorities such as Woking Borough Council have also implemented public car club parking provision and PNR charges based on emission levels.

This is also a key area where the local authority itself can lead by example by managing its own staff car parking more actively as part of its own corporate travel strategy.

N. Freight Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Lorry route or Area wide bans	Positive designation of specific lorry routes to gain access to the town centre, accompanied by zonal bans of ratrunning freight (e.g. > 7.5 tonnes) Bristol is a helpful case study.
2	Low/zero-emission zones	Application of LEZ (such as in London) with a punitive regime if the vehicle enters the zone.
3	No-entry' or restricted entry areas (e.g. pedestrianisation)	Measures to ensure that lorries/servicing vehicles do not enter pedestrian areas or deliver outside their window. Examples include the Broadmead (Bristol) servicing plan and access restrictions. This intervention is complemented by consolidation centres that enable smaller/lighter (potential electric) vehicles to do the final 'in town' leg of the journey (a good demonstrator site is also Bristol).
4	Consolidation Centres to support town centre deliveries	Location of a consolidation warehouse that allows all town centre goods to be distributed in a more efficient manner using lighter vehicles. Lends itself to smaller commodities.
5	Sustainable freight initiatives/logistics demonstration projects	Umbrella terms given to 'opportunity' schemes to demonstrate freight interventions that could be supported by the Freight Transport Association, the Road Haulage Association, the Chartered Institute of Logistics and Transport, or the DfT.

Minor Interventions		
6	Other tele-services including home delivery	Home distribution services through telephone sales.
7	Fleet management advice to logistics companies/hauliers/SMEs	Guidance on how to 'green' fleet obtainable via the Energy Savings Trust and other environmental portal.
8	Driver training (lower emissions and considerate driver programmes)	Existing government programmes to enable HGV/lorry drivers to drive more considerately and through driving practice to reduce CO2 emissions.
9	Mobile shops and home delivery schemes, mail-order & web purchasing	Home delivery through on-line shopping (e.g. Tesco, Ocado, Sainsbury's, Curry's, Argos etc)

Commentary

The management of freight in terms of volume, routing and emissions will require different emphasis in each of the 3 West Midlands towns.

There are simple 'easy wins' that can be carried out by all three authorities in terms of awareness raising and signposting businesses and freight operators to nationally-available advice. This can be provided as part of the normal travel plan advice service or through other portals such as Business Link/Economic Development and low-carbon advice.

The issue of freight only lanes, restricted servicing and consolidation will require specifically consideration. It may be possible to develop smaller scale consolidation provision for non-bulk goods and develop this around alternative energy 'lighter' vehicles.

Again, this intervention relies to a degree on national best practice emerging from the DfT, EST and other professional bodies representing the freight and logistics sector.

O. Water Transport Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Commuter 'sail and ride'	Use of passenger boats as part of commuter journeys (e.g. River Thames riverboat services from Waterloo to the 02 arena via key stopping places)
2	Leisure water use	Boat hire, recreation activities aligned at promoting healthier lifestyles.
3	Water transit for freight/heavy goods movement	Use of canal and inland waterway systems to carry construction materials and bulk goods (e.g. construction of parts of the Olympic Park).
Commentary		
In order to give holistic consideration to all types of interventions, it is important for at least the applicability of 'water transport' modes to be tested. We would expect these to relate to locations where river transport is likely to generate a critical mass (e.g. in the case of London where there are a number of passenger boarding points along the Thames corridor) of where river crossings between major population areas in required (e.g. Woolwich ferry in London, Mersey ferries connecting Liverpool and Birkenhead). For construction and freight movement, this will normally be in locations where there is either a strategic port and/or inland waterways capable of carrying heavy loads. For all 3 growth town locations the role of water is very limited, with the exception of some light recreation activity in Hereford and Shrewsbury		

P. Highways and Capacity Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Dualling of capacity	Provision of dual carriageway extended from single carriageway width.
2	New part/full ring road (inner)	Provision of a ring road around a town centre.
3	New part/full ring road (outer)	Provision of an outer ring road that will be located on the urban fringe and possibly in open countryside/involve greenfield land.
4	Strategic junction remodelling/capacity improvements	Provision of grade separated junctions, improved junction treatment to improve capacity (e.g. roundabout, signalisation, enhanced junction capacity, splitter lanes).
5	Strategic signalisation/ITS/UTMC system	Town-centre wide or radial UTMC system to mange existing capacity better but with no physical roadspace enhancements; dealt with via timings, potential introduction of additional signalised points.
6	Traffic platooning tools for key radials	Linked to (5), this intervention specifically looks at signalised 'links' to optimise traffic flow and keep speeds constant, reducing emissions.
7	Capacity enhancement along radials/tackling key pinchpoint	Targeted, location-specific road widening/additional lanes/use of 'gates' to separate traffic, HOV lanes.
8	Strategic links to facilitate and access new development	New road links provided by developers or pump primed by the RDAS to unlock key development sites.
9	Improved access to strategic road network (new junctions etc)	New junctions provided by developers (or RDAs) to enable direct access onto the trunk road and primary County network.
10	New road bridges	Targeted investment in additional infrastructure (e.g. river bridging points).
11	New bus only and or	Targeted bridging points to give 'advantage' to

	Ped/cycle bridges	bus/walking/cycling journey times.
Minor Interventions		
12	Site specific junction improvements on local networks	Local network improvements to ease capacity/flow which are likely to be small in scale.
13	Localised speed limits	Linear speed limits (e.g. outside schools, urban gateway locations).
14	Localised traffic management schemes	Home zones, 20mph zones etc.
15	Banned rights turns etc to improve efficiency of key routes	Reduced turning movements to improve safety and improve journey times.
16	Changes to junction timings/flow	Minor adjustments to junction geometry and signalisation timings.

Commentary

It is important to the note that this grouping of interventions is based on the 'toolbox' of highways infrastructure solutions rather than scheme specifics. The reason for assessing the applicability of the tools rather than specific major schemes is so the role of the intervention can be fairly assessed against other types of intervention.

For example the role of this strategic DaSTS assessment is not to specifically asses a travel plans for a given company, or to designate a defined geographic area for personalised travel planning. Neither does it recommend specific improvement to specific bus routes. Therefore in assessing the appropriateness of different types of highway measures for a given town, we have been equitable in assessing more traditional highway measures against sustainable transport alternatives.

The next stage of the DaSTS prioritisation process then ranks the relative attractiveness of each of the interventions (following the RAG scoring system) and then recommends scheme specifics within the context of this validation process.

Major interventions principally relate to major road-building programmes, strategic corridor improvements, new/changes to existing junctions and stand alone infrastructure proposals that generate their own Major Schemes business Case. These are also designed to benefit, or will have a linkage to, the Highways Agency's trunk road or motorway network.

Minor interventions are those normally advocated by the local authority at specific

locations on the network, or comprise localised signalisation, traffic calming and traffic management schemes.

Q. Management and Measurement Interventions		
Major Interventions		
	Intervention	**Description, comment or example**
1	Traffic link and junction flow	Standard cordon and junction turning movement surveys, including ATC counts.
2	Bus patronage	On bus and bus boarder surveys , ticket data.
3	Rail patronage	On train and train station surveys, ticket data.
4	Accident and Safety Data	STATS19 data from Police.
5	Walking flows	Cordon counts and intelligence from local groups, travel plan survey data.
6	Cycling flows	Cordon counts and intelligence from local groups, travel plan survey data.
7	Trip Diary Records	Household interview and postal surveys.
8	Journey Time Reliability	Highways Agency data and County level time surveys.
9	Journey Time	Highways Agency data and County level time surveys. Also potential use of TRAFFICMASTER and STRATEGIS
10	Traffic speed	Observed radar gun survey and derived calculations from (9) above.
11	Carbon reduction (inc other emissions)	Assessment of networks using Defra/DfT indices.
12	Travel Plan Surveys/Census - % response rate	School, workplace, residential and planning process led surveys.
13	Liftshare data	Direct from local authority and/or Liftshare.
14	Stated preference surveys	Household and street interview surveys.

15	Personalised Travel Planning Results	PTP household programme.
16	Land Use Planning Decisions	Automatic decisions from the local authority planning register.
17	Residential Travel Plan Incoming Resident surveys	Secured via residential travel plans (planning led).
18	Park and Ride patronage	Car park survey and on-bus/ticket data.
19	Uptake of travel plan business advice	Number of businesses engaged with the local authority.
20	Numbers of people cycle trained	Cycle Training providers.
21	No. of people pedestrian trained	Pedestrian Training providers.
22	Number of cycle parking spaces provided	Returns from schools/employers, data on public parking stands.
23	Quality Bus Partnership	Public Transport team within local authority.
24	Freight Quality Partnership	Freight team within local authority.
25	Area Wide Travel Plan Forums/Networks	Via Highways Agency Influencing Travel Behaviour and LA travel plan coordinators.
26	Using other National Indicator monitoring for non transport data (direct and indirect)	Local authority officer responsible for assembling audit returns.

Commentary

In itself 'monitoring' is not an intervention , but it is required to underpin all of the other physical and behavioural interventions covered in Intervention Groups A to P. It is also needed to support the effective management of intervention packages, particularly where measurement of behaviour change, mode shift and carbon reduction is required

Most authorities are able to access data of the types listed above, but prior to embarking on the implementation of an intervention package, it is important that the local authority has self-audited how it can easily track performance. In the case of all West Midlands towns there is a good spread of 'measurability' represented.

Monitoring will need to be linked to that required for the LTP and LAA processes.

Appendix 4 Option evaluation process and appraisal tool

Appendix 4

Appraisal tool and option evaluation methodology

Overview and Justification

In developing the assessment process we have categorised interventions into a number of main themes (or 'families') for ease of review.

A key part of this stage in the DaSTS process is the identification of the role of different interventions to achieve mode shift, and whether the town is 'ready' to embrace the intervention given technical and public acceptability limitations. At this stage the assessment is based on the 'tools' rather than specific schemes.

From the 160+ interventions tested in this process, the next stage is to extract those interventions which are likely to be most successful for the 'menu of measures', and to assemble packages which draw on specific complementary measures from the different menus.

This process can either develop a preferred package, or a series of package options for further testing. Blending together interventions that work well together, it will also be possible to give an overall indication of potential mode shift to sustainable modes can be derived, bringing together the wider case studies and national best practice. This would form the basis for any DaSTS Phase 2 study where more detailed analysis of trip reductions could also be modelled.

In the case of other towns in the UK, such as Ipswich, a MSBC is already being promoted for a town wide sustainable package. Ispwich is also one three towns included in the A12 Corridor DaSTS study. This provided and opportunity for the assessment tool described below to be validated against the measures which have been included in the Ipswich MSBC. This suggests that should any of the three West Midlands growth settlements move forward with such a strategy on the basis of the DaSTS study, it should have a good basis for a detailed appraisal.

Development of a comprehensive list of interventions

From previous experience of the consultant team and through engagement with stakeholders in workshops, a long list of transport and non transport interventions has been developed.

For the purposes of simplicity we have grouped the interventions into 17 themes or 'families' as set out overleaf. These are for purposes of analysis and presentation, as we have assessed the suitability of each individual intervention for each town at a detailed level in the next section.

Note that there are instances where a specific intervention may appear in more than one 'family'. This is appropriate because the context in which the intervention is being considered will be different.

For example ‘rail station travel plans’ may feature within the travel planning ‘family’ as a core tool but also feature as a supporting tool to the ‘rail’ family of interventions. Similarly, advancement of bus lanes/corridor will feature in both ‘bus’ and ‘highway infrastructure’ families. However, the specific scorings may be different in each case, in the event that the bus lanes (in the context of public transport) scores highly but in the context of highway restraint and capacity reduction would possibly score less under the ‘infrastructure’ category depending upon the position of the local authority on this issue.

	The 17 Intervention ‘Themes’
A	Strategic governance, legislative and fiscal measures
B	Spatial planning policy and sustainable land use planning
C	Vehicle Technology Developments
D	Strategic Smarter Choices/Travel Behaviour Measures
E	Travel Plans
F	Promotion and Marketing
G	Walking/DDA Access
H	Cycling
I	Public Transport Innovation and Quality - Bus
J	Public Transport Innovation and Quality - Rail
K	Public Transport - Park and Ride
L	Intelligent Transport Systems and Capacity Management
M	Parking Strategies and Management Tools
N	Freight Management
O	Water Transport
P	Highways Infrastructure and Network Capacity Enhancement*
Q	Management, Monitoring and Measurement

The interventions have been split into 2 categories; those that are **major** (e.g. settlement wide personalised travel planning, key changes in car parking charges and regime) and those that are **minor** (e.g. very specific tools that would support a wider strategy such as walk buddy scheme, information leaflets etc.). Therefore in deciding on future programme priorities and the focus of future investment decisions, the 'major' interventions will take the pre-eminence, as many of the 'minor' measures will rely on related major interventions being put in place. first.

There are 4 categories of interventions.

Soft - covering behaviour-based, promotion, information, publicity and other similar interventions. These are normally associated with smarter choices-style approaches, but practically every intervention theme will have a ‘softer’ dimension needed to support it.

Policy - covering spatial planning, transport policy, guidance and other governance tools.

Infrastructure - covering all forms of infrastructure approached ranging from DDA improvements (e.g. dropped kerbs) to major infrastructure investment (e.g. new public transport interchange).

Technology – covering all forms of technological intervention including road user charging, electric vehicles, TDM methods, access controls, wide area UTMC, passenger information, interactive websites etc.

The 160+ interventions are described in detail together with commentary and examples in the 17 tables in Appendix X. They are split between major and minor categories for ease of evaluation.

Scoring / RAG Assessment of Interventions for the study settlements

A separate desk-top assessment was carried out for each of the three settlements with input from officers and the consultant team members, who have a working knowledge of each of the 3 towns, to develop scores for each intervention. There is scope to review and update this process and the scoring of the interventions when resources permit.

The Interventions Sifting Tool

For the purposes of simplicity we have grouped the interventions into 17 themes as set out above. These are for purposes of analysis and presentation, as we have assessed the suitability of each individual intervention for each town at a detailed level. The detailed assessment used a series of evaluation matrices and a scoring system. Each assessment sheet is laid out under the following headings:

Intervention

This is a specific measure which is capable of being implemented in its own right, but which in reality would be put in place as part of a wider strategy which draws on complementary measures elsewhere in the listing/s. This is why in some cases measures may appear win more than one intervention family. but the scoring would reflect the context in which the intervention is listed

As described above, the interventions have been split into 2 categories, major and minor..

Type of Measure

There are 4 categories:

Soft - covering behaviour-based, promotion, information, publicity and other similar interventions. These are normally associated with smarter choices-style approaches, but practically every intervention theme will have a ‘softer’ dimension needed to support it.

Policy - covering spatial planning, transport policy, guidance and other governance tools.

Infrastructure - covering all forms of infrastructure approached ranging from DDA improvements (e.g. dropped kerbs) to major infrastructure investment (e.g. new public transport interchange).

Technology – covering all forms of technological intervention including road user charging, electric vehicles, TDM methods, access controls, wide area UTMC, passenger information, interactive websites etc.

Scoring Process

Has it worked?
This criteria is scored 1-5 as follows and is completed for each individual town

1 No known test case (nationally/elsewhere)
2 Known test case (nationally/elsewhere) but poor success/not proven fully
3 Known test case (nationally/elsewhere) with evidence that suggests the approach works in principle
4 As 3 but with local evidence that the approach has been tested but lacks full monitoring base
5 As 4 but with firm local evidence/robust monitoring that the measure has worked

Justification is given in the Evidence/Commentary column where appropriate

Can it work here? (i.e. in this town or city)
This is also scored 1 - 5 as follows based on the professional evaluation of the combined consultant/local authority officer team. At this stage it simply assesses whether it is an intervention that at a professional level the local authority would be keen to pursue and have an appetite to see work. Political acceptance has not been assessed as part of this process due to the shifting nature of the political scene against the overall DaSTS timeframe through to 2024. Where the local authority is not the direct delivery agent the level of influence the LA has to achieve change should be scored.

1 Not suitable for consideration (reasons given in Evidence/Commentary column (e.g. town is too small to support the measure etc)
2 Consideration possible in longer term (i.e. post 2019 - for example would depend on a central Government policy decision or wider intervention to make it appropriate/viable)
3 Worthy of consideration for the town (no reason to exclude)
4 On basis of evidence (national/best practice) there is a strong fit to the town
5 On basis of evidence (as above plus local) there is a strong fit to the town

Can it be delivered here – technically?
This criterion looks forward to assess whether the intervention can physically be provided within the town based on scores 1 – 5:

1 No/very limited ability to physically deliver this intervention (Cost is NOT a determinant at this point)
2 Consideration possible in longer term but requires other strategic interventions to be put in place (legislative change, technological improvements)
3 Ability to deliver the intervention technically
4 On basis of national evidence, strong fit in terms of technical deliverability
5 On basis of national and local evidence strong fit in terms of technical deliverability.

Can it be delivered here – organisationally?
This criterion looks forward to assess whether the intervention can organisationally be provided within the town based on scores 1 – 5:

1 No/very limited ability to deliver this intervention based on the local authority and its partners (Cost is NOT a determinant at this point). (*Note political will can be accounted for in this score but note it is likely to be a shorter term variable)*
2 Consideration possible in longer term but requires other strategic interventions to be put in place (organisation change, revised partnership arrangements)
3 Ability to deliver the intervention taking account of any key stakeholder/organisational/third party barriers
4 On basis of national evidence, strong fit in terms of organisational deliverability
5 On basis of national and local evidence strong fit in terms of organisational deliverability

Can it be delivered here – public/customer acceptability?
The criteria look at the other side to technical delivery and asks whether the public (or relevant customers such as developers) in the town would accept the measures. Whilst interventions can physically be provided. if the public acceptability level for these types of measures are not understood, not seen as culturally relevant, or the public can utilise planning and other consultation mechanism to frustrate them, then this should temper the ranking of the intervention. Note that this score should NOT reflect short term political issues/concerns as compared to the DaSTS timeframes these are much more immediate and localised. Assess the suitability of the intervention on how the customer will respond (e.g. member of the public, developer etc)

On the basis of scores 1 – 5:
1 Strong public resistance and negativity likely
2 May be some change in view in the longer term but not likely within DaSTS 1 timeframe (2014-2019)
3 Public view likely to be neutral
4 Healthy level of public support based on sound awareness of issue nationally (e.g. climate change, carbon, vehicle technology etc) but not tested locally
5 Healthy level of support based on local awareness/behaviour and past/current trends in attitude.

Affordability
The criteria assess the overall affordability of the intervention, although the ability of the measure to be integrated within an overall package should be accommodated in the scoring. At this point the likely split between revenue and capital (and accessibility of funding) should **no**t be a reason for a low score as this criteria focuses on the potential overall cost of the intervention rather than the source of funding. However if the measure requires repeat funding of smaller sums over a longer period for the measure to be effective, then the total cost is taken into account..

On the basis of scores 1 – 5:
1 Cost prohibits consideration of measure
2 Significant cost likely to prohibit measure unless heavy external funding and/or cost reduction through package approach
3 Affordable
4 Relatively cheap measure capable of replication at economies of scale
5 Very cheap measure

Benefit to Cost Ratio
The criteria look at the BCR levels.

On the basis of scores 1 – 5:

1 BCR scores less that 2:1 ratio (normal 'pass' for infrastructure schemes to be considered
2 BCR score likely to >2:1 and <4:1
3 BCR over 4:1 on basis of DfT Sustainable Travel Town Programme and HA evaluation of travel plans
4 BCR over 8:1
5 BCR over 10:1 (in line with HA travel plan evaluations producing excess of 13:1)

DaSTS Sensecheck

Not all interventions will address the key DaSTS goals in the same way. The 5 DaSTS objectives will by definition tend to support different flavours of intervention and therefore a score of 1 – 5 has been applied to each intervention measure in the light of its potential impact on each of the DaSTS goals.

To clarify

0 Intervention will have a negative impact on the strategic DaSTS goals (e.g. scheme that would increase car commuting)
1 Intervention will have a limited/neutral impact on the strategic DaSTS goals (e.g. new road link that increases vehicle trips but takes traffic away from a local centre or AQMA)
2 Intervention will have some positive impact on the DaSTS goals but will be longer term (2019+)
3 Intervention will have some positive impact on the DaSTS goals in the medium term (to 2019)
4 Intervention will have a highly positive impact on DaSTS goals (short/medium term)
5 Intervention will have a highly positive impact on DaSTS goals (in short, medium and longer term)

Scalability Factor - Size of Market affected by intervention

Based on the baseline evidence for each of the towns, and the smarter choices 'healthcheck' process, this factor helps to identify which measures are likely to have most impact in terms of scale given the different 'people' markets within each town.

The factor attracts a higher weighting at the end of the process, so those fundamental interventions that are likely to benefit a wide range of social groups and needs (i.e., working population, schoolchildren etc) score much higher than those that will only affect or appeal to a marginal part of the population.

x1 Intervention will only be of benefit to a very specific target group /location and/or less that 5% of the population. *Example - Blue Badge parking, specific Dial A Ride service improvements, very localised publicity programme etc*
x2 Intervention will be of benefit to a defined sector/location representing less than 10% of the population. *Example - Home Zone area for a specific residential quarter, measures to benefit 'expert' cyclists , etc*
x3 Intervention will be of benefit to a wider target group (e.g. commuters, schoolchildren). *Example - Workplace and School travel plans, walking buses real time passenger information on key routes, park and ride, cycle parking etc*

x4 Intervention will be of benefit to multiple sectors representing at least 50% of the population. *Example - Health Promotion/Active travel programme targeted at key population segments, promotional campaigns etc*

x5 Intervention will be universal in application and capable of application on a town wide basis to bring benefits across a wide range of groups. *Example - Town Wide Personalised Travel Planning, Cycling Town, Sustainable Travel Town programmes, wide area reclassification of streets/speed reduction, cycle network, improved bus network etc*.

Scalability Factor - Impact on Mode Shift

Based on the baseline evidence for each of the towns, and the smarter choices 'healthcheck' process, this factor helps to identify which measures are likely to have most impact in terms of mode shift away from single occupancy car

The factor attracts a higher weighting the end of the process, so those fundamental interventions that are likely to generate a high level of mode shift away from single occupancy car can be favoured.

x 1 Intervention will have insignificant impact mode shift (neutral - 2%)
x 2 Intervention will have limited impact on mode shift (3 - 5%)
x 3 Intervention will generate modest impact on mode shift (5% - 8%)
x 4 Intervention will generate significant mode shift (8 - 10%)
x 5 Intervention will generate significant mode shift (>10%)

Weighting Process

The weighting factors for the assessment process are flexible and can be changed according to both local priorities and those emanating from central Government. In line with the briefings on the DaSTS process from regional government and DfT, the assessment has weighted the DaSTS goals towards economy and carbon objectives. The assessment weighting process also prioritises local issues around deliverability and acceptability to help identity those interventions that are more likely to succeed . The table overleaf explains in full how the weighting process works and the reasons behind the factors applied in this study.

DASTS ASSESSMENT PHASE 1 - SCORING WEIGHTINGS

Key Question	Weighting	Explanation
LOCAL CONSIDERATIONS		
Has it worked	**1**	**Neutral weighting on basis that intervention whilst tested would need to be customised/enhanced in this particular setting**

Can it work	**1**	**Neutral weighting on basis of professional judgement of its viability for the given location**
Can it be delivered here - technically	**1.25**	**125% weighting on basis that this score is about localised relevance and customisation and the capacity of the measure to be physically introduced on a local market and conditions**
Can it be delivered here - organisationally	**1.25**	**125% weighting on basis that this score is about the ability for a local authority and its partner organisations to accommodate, mobilise and deliver the measure and takes account of 'political will'**
Can it be delivered here - public will/customer acceptability	**1.25**	**125% weighting on basis that the general public need to be receptive/persuadable to accept the intervention. 'Customers' include future planning applicants/developers**
Affordability	**1.5**	**150% weighting on basis of cost of measure and importance within DfT sifting criteria**
Benefit to Cost Ratio	**1.5**	**150% weighting on basis that the BCR is a key factor in moving forward measures into DaSTS packages**
Scalability - Size of Market	**2**	**200% weighting on basis that this score is about the potential size of the 'people' market to benefit from the intervention**

Scalability - Scale of Mode Shift	**2**	**200% weighting on basis that the score reflects the ability of the measures to achieve modal shift away from single occupancy car within the target town/authority area NOTE - All DASTS scores are weighted by 60% as a default so that the 'localised' factors (Columns F G H I) are given priority within the scoring system. However some DASTS goals require more emphasis than others as advised by DfT in their briefings on DASTS 1 studies.**
DASTS CONSIDERATIONS		
DASTS 1 - Economy	**1**	**100% weighting due to importance of sustained local economy and job creation within growth points/locations**
DASTS 2 - Carbon and emissions	**1**	**100% weighting - Prime goal as advised by DfT in relation to carbon reduction**
DASTS 3 - Safety and Health	**0.8**	**Reflects the priority given by ECC and SCC to road safety and health**
DASTS 4 - Quality of life/sustainability	**0.6**	**Default weighting of 60%**
DASTS 5 - Equality of opportunity	**0.6**	**Default weighting of 60%**

Overall Scoring System

All these scores can then be converted into an overall Intervention Score. This is calculated as follows:

(SUM of all the scores against the 7 key questions with weighting factors included) + (SUM of all the DaSTS Sensecheck scores with weighting factors included) + (SUM of Scalability Factor Scores with weighting factors) = DASTS SCORE
This allows weighting of the score towards the evidence based/local deliverability questions whilst recognising the effectiveness of the measure in relation to DaSTS goals.

Strategic Assessment

Once the scoring is completed, the individual scores for each intervention are converted into a RAG colour coded assessment for easy visibility.

The scoring range achievable spans from 16 points (minimum) to 82 (maximum) as is used as a guide to the RAG process. This is because for certain intervention 'themes' some of the scores may be all moderated down because there is no local evidence of the intervention working at present (e.g. sustainable travel town programme) or because the interventions by nature are limited to certain sectors of the population (e.g. a 'cycling-focused' programme for schoolchildren will only affect a limited audience).

Note that whilst the scores below are given as a guide to whether the measures should be considered further, discretion has been applied within each theme depending on the range of scores produced and attention given to the nature and distribution of the higher scoring interventions.

Scores less than 35 (<40%) (not recommended for further consideration)
Scores 35 to 50 (40% - 60%) (moves forward to next stage but likely to be medium to long term)
Scores more than 50 (60% + pass) (Priority intervention capable of moving forward in short, medium and longer term)

Commentary

This column is used to provide any specific comments, evidence, pointers or other useful material to justify the scoring.

The completed assessment sheets for each category of intervention, for each of the study settlements, are set out in full in the following Appendix.

Appendix 5a Option Assessments - Telford

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DASTS STAGE 1 ASSESSMENT TABLE FOR VEHICLE TECHNOLOGY + DEVELOPMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
STRATEGIC GOVERNANCE INTERVENTIONS		**DIRECT INTERVENTIONS - MAJOR**																		
	1	Road user charging (cordon) e.g. toll-based charges for crossing cordon point (as per London congestion charging zone)	Policy / Technology	3	2	2	1	1	3	4	2	5	4	4	3	34.9	3	3	46.9	Could be introduced technically but barrier is a lack of public/political support
	2	Road Pricing based on Vehicle emission Level - e.g. toll-based charges based on vehicle emission rating (using ANPR or other technology)	Policy / Technology	3	2	2	1	1	3	4	2	5	4	4	3	34.9	3	3	46.9	As above
	3	Bridge and entry gate tolls e.g. traditional charging model	Policy / Technology	3	2	2	1	1	2	2	3	4	4	4	2	29.8	2	2	37.8	As above
	4	'Congestion Management' zones e.g. area wide strategies to reduce car use/volume at peak times	Policy / Technology	3	2	2	1	1	3	2	3	4	4	4	3	31.9	3	3	43.9	As above
	5	Road tolling and 'Pay per mile' in-vehicle metering schemes e.g. schemes based on duration of time spent/distance travelled on network	Policy / Technology	3	1	1	1	1	3	2	2	4	4	4	3	28.7	3	3	40.7	As above
	6	Vehicle emission standards and roadside testing - using local control mechanisms and fines to deter use of high emission vehicles on key corridors and/or in town centres	Policy / Technology	3	2	2	2	1	5	3	3	5	4	4	3	38.7	4	2	50.7	As above
	7	Pay to drive schemes/car club i.e. reducing 2nd car ownership and use through easy to use pay as you go rental with all prices inclusive (as per London StreetCar scheme)	Policy / Soft	3	2	2	2	1	3	4	3	4	4	4	4	36.8	3	2	46.8	As above
		INDIRECT INTERVENTIONS - MINOR																		
	8	Business rates and inward investment subsidies to attract businesses e.g. use of enhanced rates (as per Business Improvement Districts) to make area wide travel plans viable	Policy	3	3	3	3	2	2	3	4	3	3	3	3	36.5	3	3	48.5	Given level of economic pump-priming and investment in Telford, integration of travel l plans into new locating businesses should be viable. Also access via existing wider businesses advice portals and economic partnerships
	9	Housing standards BREEAM/green influencers e.g. use of BREEAM/Could standard to ensure developers include sustainable travel and residential travel plans as an integral part of their scoring process)	Policy	4	4	4	4	4	2	3	4	4	4	5	4	47.1	3	2	57.1	
	10	Provision of affordable housing of quantify/location to meet sustainability objectives e.g. ensuring % and mix of affordable homes is distributed in the optimum manner to encourage sustainable travel, skills assessment of incoming residents to assess proximity to jobs	Policy	3	4	4	4	4	2	3	4	4	4	5	5	46.7	3	2	56.7	

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DASTS STAGE 1 ASSESSMENT TABLE FOR SPATIAL PLANNING POLICY AND SUSTAINABLE LAND USE MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
SPATIAL POLICY INTERVENTIONS		**MAJOR**																		
	1	**Development Control Guidance/Policy for Smarter Choices e.g. locally relevant Supplementary Planning Document to reflect DfT Travel Plans and the Planning Process Guidance 2009**	**Policy**	**4**	**4**	**4**	**4**	**2**	**5**	**5**	**3**	**4**	**4**	**4**	**5**	**51.1**	**5**	**4**	**69.1**	Willigness for Telford to develop this - sound principles put in place already in terms of developing residential trvel plans whch reflect DfT 2009 guidance.
	2	**CIL/interventions and Funding strategies - e.g. flexible Capital and Revenue Funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value**	**Policy**	**1**	**4**	**4**	**4**	**4**	**4**	**4**	**3**	**4**	**4**	**4**	**5**	**47.6**	**5**	**3**	**63.6**	Flexible funding related to outcomes would be welcomed given current levels of Section 106 funding for residential schemes already secured is limited and there are concerns the total value of public/sustainable transport packages may be insufficient to deal with full impact of development
	3	**Area Action Plans include sustainable travel interventions e.g. requirement for core sustainable transport infrastructure and area wide travel plans**	**Policy**	**3**	**4**	**4**	**4**	**3**	**3**	**3**	**4**	**4**	**4**	**5**	**5**	**47.0**	**3**	**3**	**59.0**	Telford AAP for the town centre redevelopment currently being done and is globally significant for the whole town
	4	**Flexibility in implementation of parking standards if smarter travel package is strong e.g. allowing a reduction in the number of spaces provided (no-car or low-car ratios)**	**Policy**	**3**	**4**	**2**	**2**	**1**	**3**	**4**	**4**	**4**	**4**	**4**	**5**	**40.4**	**2**	**1**	**46.4**	Reducing car parking provision is not likely to be acceptable in Teflford from the public perspective and and expectatino will be in place for a 'minimum' level of provision

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DASTS STAGE 1 ASSESSMENT TABLE FOR SPATIAL PLANNING POLICY AND SUSTAINABLE LAND USE MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
Vehicle Technology Interventions		**MAJOR**																		
	1	Control of use of commuter/personal trips to lower emission vehicles - e.g. using ANPR or other technology to encourage use of lower emission vehicles for commuter trips into town centres	Soft / Technology	3	2	2	2	1	2	2	2	4	4	4	3	30.7	3	3	42.7	Local authorities with parking controls determined on emission levels include London Borough of Richmond (parking permits/charges) and Woking Borough Council (parking permits for Council car parks)
	2	Lower emission vehicles for business and commercial use - e.g. encouraging use of electric/hybrid and other low carbon vehicles for business travel and for sustainable distribution	Soft / Technology	3	3	3	2	3	2	2	4	4	4	4	3	37.4	2	3	47.4	Local authority and large company policies (e.g. Amey's use of Prius vehicles for TfL London contract)
	3	Alternative fuel / hydrogen	Technology	2	2	1	1	1	1	2	3	4	4	4	3	26.7	1	1	30.7	
	4	Alternative power / electric	Technology	3	3	2	2	2	2	2	3	4	4	4	3	33.9	1	2	39.9	
	5	Increased choice of fuel via petrol station outlets through partnership with local outlets/increased publicity	Infrastructure	3	2	2	2	2	3	2	2	4	3	3	3	32.0	2	2	40.0	
	6	Provision of electric charging stations - e.g. public charging points and through the planning process	Infrastructure	3	3	3	3	3	3	2	2	4	4	4	4	38.8	2	2	46.8	Now being secured through the planning process .e.g.. Sainsbury's now installing sockets as part of their customer car parks
	7	Low emission buses - use of improved design and influence of commercial operators to procure low emission fleets via QBPs	Technology / Soft	3	2	4	3	3	3	2	2	4	4	4	3	38.4	2	3	48.4	Experiments in towns such as London and Bristol but supported by strong QBPs or stronger control
		MINOR																		
	8	Eco Driving Training Schemes - e.g. promotion of national EST programmes and/or local scheme development for rural based businesses	Soft	4	3	3	3	4	4	3	2	4	4	3	3	42.8	2	1	48.8	Currently available via Energy Savings Trust as part of wider logistics green fleet advice
	9	Vehicle fuel adaptation grants - as above with top-up from local sources	Soft	4	3	3	3	4	2	2	3	4	4	4	4	40.5	2	1	46.5	
	10	Alternative fuel / LPG e.g. local grant schemes on top of any central government scheme to promote use of vehicles	Soft	2	3	3	3	4	2	2	3	4	4	4	4	38.5	2	1	44.5	

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DASTS STAGE 1 ASSESSMENT TABLE FOR STRATEGIC SMARTER CHOICES / TRAVEL BEHAVIOUR MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
STRATEGIC SMARTER CHOICES INTERVENTIONS		**MAJOR**																		
	1	**Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments**	**Soft**	3	5	5	4	4	4	4	3	4	4	5	5	52.5	5	5	72.5	Health/wellbeing and active travel likely to be a strong component of such a strategy for Telford
	2	**Wide Area Travel Plans e.g. mixed use, commercial and industry/business park travel plans**	**Soft**	3	4	4	4	4	4	4	4	4	4	5	5	51.2	5	4	69.2	Telford are keen to develop in this area with potential link to Highways Agency Influencing Travel Behaviour Programme in the West Midlands - scope to look at wide area approach on an M54 corridor basis following the Area 9 (Junction 8-10) Corridor Travel Plan
	3	**Corridor Smarter Choices Tools - clustering smarter travel interventions along a given corridor (covering residential, school, workplace, cycle promotion etc)**	**Soft / Infrastructure**	3	4	4	4	4	3	3	4	4	4	5	5	48.2	3	4	62.2	As above
	4	**Sustainable Travel Town 'blanket' approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes**	**Soft / Infrastructure**	3	3	4	4	3	4	3	5	4	4	5	5	48.5	5	5	68.5	Telford's layout would give some constraint to this intervention and would have to be focused on specific locations/segments rather than a blanket town approach (as evidenced in Worcester STT demonstration programme)
	5	**Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc**	**Soft**	4	4	4	4	4	4	3	4	4	5	5	5	51.5	4	4	67.5	Telford are keen to reach wider markets and have a god working relationship with the PCT already in place

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DASTS STAGE 1 ASSESSMENT TABLE FOR TRAVEL PLAN MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scoring 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
TRAVEL PLAN INTERVENTIONS		**MAJOR**																		
	1	Business Stakeholder Engagement/Advice/Travel Plan 'Forums'/'Transport Management Associations' & Business Improvement Zones - all providing longer term management of travel plans - secured via planning process	Soft	3	4	4	4	4	3	4	4	4	4	4	4	48.5	3	4	62.5	Has strong potential but needs to be embedded with wider economic development/'business link' and mainstream commercial activities rather than sold as a 'transport' issue
	2	Planning-led travel plans including enforcement regime	Soft	4	4	4	4	3	4	4	4	4	4	4	4	49.8	3	4	63.8	Already being developed through residential travel plans although scope to develop 'Telford' guidance which supports the DfT 2009 travel plans guidance
	3	Workplaces/Hospitals/Universities/HE Sector travel plans	Soft	4	4	3	4	3	2	4	4	4	4	4	4	45.5	3	3	57.5	Importance of Council to lead by example and place resources behind its own corporate travel plan - there are still decisions to be made concerning priority of workplace travel plan advice
	4	Schools and Colleges Travel Plans	Soft	5	5	5	4	4	3	4	4	4	4	4	4	52.8	3	4	66.8	Strong legacy already in place with equivalent of 4 staff supporting this workstreams via direct and indirect activity
	5	Residential Travel Plans	Soft	4	4	5	4	3	4	4	4	4	4	4	5	51.6	3	4	65.6	Two key sites already generating RTPs
	6	Retail/tourism/sports/concert attractors Travel Plans	Soft	3	3	3	2	3	2	4	4	4	4	4	4	41.0	2	2	49.0	Limited scope
	7	Rail Station Travel Plans	Soft	3	3	4	4	4	3	4	4	4	4	0	4	45.1	3	3	57.1	Potential for Telford with pedestrian access/localised improvements for Wellington and Oakengates
	8	Developing/promoting a car sharing scheme inc emergency lift home for car sharers	Soft	4	4	5	4	3	3	3	4	4	4	4	4	48.0	4	3	62.0	Jambusters car sharing database already in place
	9	Charging staff to park/forcing to use public car parking due to demand management and space limitation/regulation	Soft	4	4	3	1	1	3	4	4	4	3	3	3	38.8	2	2	46.8	Likely to result in strong resistance
		MINOR																		
	10	Flexi-working e.g. staggered hours, alterations to roster timebands, full flexitime with limited core hours	Soft	2	2	3	2	1	3	3	5	4	3	5	5	37.9	2	2	45.9	Limited application in Telford because of nature of labour market and types of businesses in place
	11	Home working e.g. approved homeworker policies, ability for employees to 'mix and match' with time at workbase	Soft	3	2	3	2	2	3	3	4	5	4	5	4	40.4	1	2	46.4	As above, dependent on larger scale employers effecting the change first
	12	Tele-working and conferencing	Soft	4	4	4	3	4	3	4	5	5	4	4	4	50.3	4	2	62.3	Very flexible tool with very high BCR but depends on organisational culture and overcoming perceptions of low visibility = low productivity
	13	Video-conferencing	Soft	4	4	4	3	4	3	3	4	4	4	4	3	46.2	1	1	50.2	Higher levels of up-front investment needed associated with strong business case. Only likely to be viable for major employers with multiple sites either in Telford or regional/national companies with a branch in the town.. Potential for drop in business touchdown centre' where individuals could pay by hour. Is some potential based on number of larger businesses locating into Telford
	14	Introducing employer Hot-desk policy e.g. reduction of desk capacity and operational footprint and reduction in car parking spaces	Soft	4	4	3	3	2	3	4	4	4	4	4	4	44.5	1	1	48.5	Proven case studies nationally where companies have chosen to consolidate activities on one site and increase 'productive footprint' through reduction in car parking capacity. This is scalable and can apply to smaller businesses
	15	Providing a car club/pool car facility - including use of residential car clubs to provide pool cars during the day for business	Soft	3	3	4	2	3	3	4	4	4	3	5	4	43.6	1	1	47.6	Limited scope given dispersed nature of population and cultural dimension which is pro-car
	16	Minibus/Maxi Taxi and Taxi Budi Schemes e.g. use of people carriers and taxis for 2-14/15 employees to share costs	Soft	2	3	3	3	3	3	3	3	3	3	3	4	37.9	1	1	41.9	Limited scope
	17	Grants/loans to develop on-site facilities e.g. cycle parking, showers etc	Soft	4	4	4	2	4	3	4	3	3	3	3	4	43.6	1	1	47.6	Limited scope
	18	Employer low or no-cost ticket loan schemes e.g. Carnets, reduced commercial rates bus and rail	Soft	3	4	4	3	4	3	4	3	3	3	3	4	43.9	1	1	47.9	Limited scope
	19	Vanpooling for business operations e.g. shared vans across a smaller industrial estate or 'incubator' centre	Soft	3	3	2	3	2	3	3	4	3	3	3	3	36.8	1	1	40.8	Limited scope
	20	Progressive lease-car, business mileage allowance rates and AMAP limits	Soft	3	4	4	2	2	4	4	4	4	3	3	3	43.0	1	1	47.0	Limited scope

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DASTS STAGE 1 ASSESSMENT TABLE FOR PROMOTION AND MARKETING MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PROMOTION & MARKETING INTERVENTIONS		**MAJOR**																		
	1	Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Liftshare Day, branding etc	Soft	4	4	4	4	4	4	4	2	4	4	4	3	48.4	5	2	62.4	Strong emphasis in Telford on active travel and wellbeing
	2	Business carbon assessment	Soft	4	4	4	4	4	4	3	4	5	4	4	2	49.3	2	1	55.3	Carbon support services for businesses conveyed via Business Advice/Economic Development channels would be of direct benefit to larger companies
	3	Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information	Soft	4	4	4	4	4	3	4	3	4	5	5	4	49.9	3	2	59.9	Relates to active travel
	4	Area wide health promotion interventions including wellbeing, obesity and air quality issues	Soft	4	4	4	4	4	4	4	3	4	5	5	4	51.4	4	2	63.4	Links to intervention (1) and Telford's strong promotion in this field
	5	Green Branding to match culture of town / Lifestyle marketing e.g. targeted at residents who value historic/conservation aspects of the town	Soft	3	3	3	2	1	3	3	3	4	4	5	3	37.5	2	1	43.5	Telford not seen as an eco-ethical location with limited target audiences
		MINOR																		
	6	Promotional information including timetables, maps literature, booklets, webpages, newsletters, noticeboards etc	Soft	3	3	3	3	2	4	3	3	4	3	4	4	40.7	3	1	48.7	Already evidenced by extensive resources and publicity
	7	Personalised Travel Plans and Individualised Information for households or employees (support material)	Soft	3	5	5	4	4	4	4	3	4	4	4	4	51.3	4	3	65.3	Will score highly as long as the health and active travel 'angle' is strong
	8	Personal Travel Carbon Calculator promotion of existing web-based resources to appeal to 'environmental ethical' target market which is growing	Soft	2	2	2	2	2	4	2	2	4	3	4	4	33.7	1	1	37.7	
	9	Longer Term Marketing Strategy including communications plan	Soft	3	4	3	3	3	4	2	3	3	3	3	3	39.3	1	1	43.3	

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DASTS STAGE 1 ASSESSMENT TABLE FOR WALKING / DDA ACCESS MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here technically?	Can it be delivered here organisationally (LA, key partners, politically)	Can it be delivered here public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scoring 3)	DaSTS Sensecheck: Goal 1 Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
WALKING INTERVENTIONS		**MAJOR**																		
	1	**Improving pedestrian routes/crossings and connections - e.g. lighting, DDA etc**	**Infrastructure**	4	4	4	4	4	3	2	3	4	5	5	5	47.5	4	2	59.5	Telford are building this approach proactively into new developments
	2	**Walking buses for schools**	**Soft**	4	4	4	4	4	3	3	3	4	5	4	5	48.4	2	3	58.4	In place
	3	**Green Infrastructure links/short cuts (covering Footpaths/Bridleways/PROW/RUPPs/permissive routes/desire lines/alleys investment)**	**Infrastructure**	4	4	4	3	2	3	2	3	4	5	5	5	43.8	2	1	49.8	Limited linkages at present from the urban fringe into surrounding rural areas but Telford recognise potential fro this through new developments
	4	**Aggressive use of Manual for Streets user hierarchy to make streets more pedestrian friendly including play streets, school zones, quiet lanes, woonerven/home zones, shared space etc**	**Infrastructure**	4	4	4	2	1	2	3	3	4	5	5	5	41.3	2	1	47.3	Within new developments - One of the key barriers to implementing more sustainable measures in Telford is the legacy of the New Town layout built with easy access for the car in mind. This means that much of the legacy of public opinion today is dominated by the premise that the private car still has a dominant role to play in transport and access.
	5	**Local traffic management/estate layouts that encourage active travel through directness and connectivity**	**Infrastructure**	4	5	4	3	3	2	3	3	4	5	5	5	46.0	2	2	54.0	Within new developments but against culture of enabling car access
	6	**Street design (surfaces, widths, pinch points, chicanes and vertical features) to discourage vehicles or slow them**	**Infrastructure**	4	4	4	2	2	3	3	3	4	4	4	3	41.4	2	1	47.4	One of the key barriers to implementing more sustainable measures in Telford is the legacy of the New Town layout built with easy access for the car in mind. This means that much of the legacy of public opinion today is dominated by the premise that the private car still has a dominant role to play in transport and access.
		MINOR																		
	7	**Pedestrian route map**	**Soft**	4	3	3	4	3	4	3	3	3	4	3	4	43.4	4	1	53.4	Very popular free map in Telford used for a variety of purposes
	8	**Walking support measures e.g. personal alarms/loan umbrellas, promotion of active travel, walking buddy schemes**	**Soft**	2	2	2	3	2	4	2	3	3	4	3	4	35.2	4	2	47.2	If supporting health / active travel measures
	9	**On site infrastructure improvements (showers/changing etc) inc DDA**	**Infrastructure**	3	4	4	4	4	4	3	4	4	4	4	5	49.1	2	2	57.1	Dependent on uptake of travel plans
	10	**Pedestrian signage renewal and replacement - including improved legibility code**	**Infrastructure**	4	4	4	4	4	3	2	3	3	4	4	5	45.1	3	2	55.1	Linked to new development

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DASTS STAGE 1 ASSESSMENT TABLE FOR CYCLING ACCESS MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
CYCLE ACCESS INTERVENTIONS		**MAJOR**																		
	1	Cycle route network improvement - including lighting/crossings and routes provided/improved to appropriate Bikeability standards/Safer Routes	Infrastructure / Technology	4	4	4	4	4	3	3	4	4	5	5	5	50.0	3	3	62.0	Distances quite significant from urban fringe - directness and connectivity needed
	2	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling - longer term potential - sustainable	Infrastructure / Soft	4	5	4	4	4	3	4	4	4	5	5	5	52.5	5	4	70.5	Would have serious application for the town and particularly strong if linked to health and wellbeing objectives
	3	Innovative signage (e.g. cycle responsive 'Think Bike')	Technology	3	4	4	4	3	4	3	3	3	5	3	3	44.9	2	1	50.9	Will work as long as measures are not adversely affecting traffic flow on key routes
	4	Cycle route map	Soft	4	4	4	5	4	5	4	3	4	4	3	5	52.8	5	2	66.8	Very successful map
		MINOR																		
	5	Staff discounts equipment and purchase for bikes e.g. supporting local independent traders - cycle2work etc	Soft	5	3	4	3	2	3	3	3	4	4	4	4	43.3	2	2	51.3	Dependent on effective travel plan portals to present this - being developed now
	6	Promoting cycling as a healthy way to travel inc cycle buddy and other support measures	Soft	4	4	4	4	4	5	3	3	3	4	4	5	49.6	4	2	61.6	Health drivers particularly important
	7	On-site infrastructure improvements including secure cycle parking	Infrastructure	3	3	4	4	3	2	3	4	4	4	4	5	43.9	2	2	51.9	Linked to (5)
	8	Public cycle hire (on-street) e.g. for occasional local users and for tourists/visitors	Infrastructure	4	4	4	4	2	2	2	4	4	3	4	5	42.3	1	1	46.3	Limited scope
	9	Cycle Trains for schools	Soft	3	3	3	2	3	2	2	3	4	4	4	5	37.6	1	1	41.6	Limited scope

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DASTS STAGE 1 ASSESSMENT TABLE FOR PUBLIC TRANSPORT INNOVATION AND QUALITY - BUS MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (L.A, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PUBLIC TRANSPORT BUS INTERVENTIONS		**MAJOR**																		
	1	Bus priority schemes including corridor and location measures (bus gates)	Infrastructure	5	5	5	5	4	2	3	4	4	4	4	3	50.4	3	4	64.4	Capacity space to achieve this
	2	Bus rail integration e.g.. physical interchange improvements, improved routing, better connections timings	Infrastructure	5	5	5	5	5	3	3	4	4	4	4	4	53.8	3	3	65.8	Integration at Telford, Wellington and Oakengates can be further enhanced - part of ATOC Station Travel Plan bids
	3	Improving accessibility to key locations by bus	Infrastructure / Soft	4	4	4	5	4	3	3	4	4	4	4	4	49.3	4	3	63.3	Bus penetration is a pivotal issue in terms of maintaining and enhanced mode share towards bus (as evidenced through the Peterborough STT programme)
	4	Providing/ improving bus waiting facilities	Infrastructure	3	3	3	4	3	3	3	3	3	4	4	5	42.1	4	2	54.1	Complements (3) above
	5	Bus stations - new/improved	Infrastructure	4	4	5	4	4	2	3	3	3	4	4	3	45.2	2	1	51.2	Part of town centre redevelopment strategy
	6	Real-time bus information	Soft / Technology	3	4	4	4	4	3	3	3	3	3	4	3	43.6	4	3	57.6	Technology easier to retrofit in Telford given space issues - also strong potential for new developments to accommodate for both employment and residential locations
	7	Better quality buses (tram style)	Technology / Infrastructure	3	2	3	2	4	2	2	3	3	4	4	3	35.7	2	1	41.7	Cost and accessibility likely to be the main drivers as opposed to bus design - with the exception of low floor routes and access for cluster locations for elderly customers and those with mobility impairments.
	8	Rapid Transit (dedicated or shared space)	Infrastructure	4	4	4	2	3	1	2	4	3	4	4	3	38.2	1	1	42.2	
	9	Simplification of operations within the town e.g. managing impact of multioperator regimes and competition	Policy	3	1	1	3	3	3	3	3	2	3	3	3	32.8	1	1	36.8	
	10	Recast bus network- Introduce cross town bus services and higher frequencies	Policy / Soft / Infrastructure	4	4	4	3	5	2	3	4	4	4	5	5	47.7	3	3	59.7	Previous review process in Telford led to hub and spoke approach via the town centre. However to deal with residential growth and juxtaposition of existing employment (particular blue collar, manufacturing, logistics etc) cross town or radial journeys will become more important as well as level of penetration into residential areas
		MINOR																		
		MINOR																		
	11	Web and Phone Travel Info Services e.g. 'Traveline' and 'Transport Direct'	Soft / Technology	3	3	3	3	3	4	3	3	2	0	3	4	37.0	5	2	51.0	Reinforced publicity of existing national travel services
	12	Public Transport Concessions/discounted fares	Soft	4	4	4	4	5	2	3	3	2	2	3	5	43.2	3	2	53.2	Already in place
	13	Inter-operator and Plus Bus ticket schemes (inc Smart Ticketing)	Soft	4	4	4	4	4	3	3	4	2	2	3	5	44.4	4	2	56.4	Plus Bus in place
	14	'Quality Route' schemes and QBP	Infrastructure / Soft	5	5	5	5	5	2	2	3	3	2	3	3	46.0	3	2	56.0	
	15	Demand Responsive Services	Soft	4	5	5	5	5	2	3	2	2	2	3	3	44.5	1	1	48.5	
	16	Bus revenue support and fuel duty rebates	Soft	3	3	3	3	4	2	2	3	3	1	3	3	34.9	1	1	38.9	
	17	Community, 'dial-a-ride' and works- bus services	Soft	4	3	3	3	3	3	2	3	3	3	4	5	39.6	2	2	47.6	

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DASTS STAGE 1 ASSESSMENT TABLE FOR RAIL MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
RAIL INTERVENTIONS		MAJOR																		
	1	Rail station upgrades and customer waiting improvement	Infrastructure	3	3	3	3	4	1	3	4	3	4	4	4	39.5	3	3	51.5	
	2	New rail station to meet local demand and projected growth	Infrastructure	4	4	3	2	4	1	4	4	3	4	4	4	41.8	1	1	45.8	Telford Central was provided as new station in past and has generated healthy 2-way patronage for in/out commuting, leisure and education trips . Not required but station enhancements are.
	3	Promotion of new/adjusted services	Soft	4	4	4	3	4	2	3	4	4	3	4	4	44.5	3	3	56.5	Line capacity fixed at present with 43operators (London Midland City, Cross County, Arriva Trains Wales, Wrexham and Shropshire)
	4	Rail station travel plan	Soft	3	4	4	4	4	4	4	3	4	4	4	4	49.0	4	4	65.0	Potential for Telford Station in particular
		3																		
	5	Providing rail discounts	Soft	3	4	4	3	4	3	3	4	3	3	4	5	44.6	3	3	56.6	No special benefits over and above those already commercially available - note positioning of Telford beyond the edge of the Centro (WMPTE) network has implications on pricing regimes
	6	Improving rail passenger capacity in peak	Infrastructure / Soft	3	4	4	3	4	2	4	4	3	3	4	4	44.0	1	1	48.0	No peak hour congestion issues at present
	7	Inter-operator and 'OysterCard' schemes (Plus Bus)	Soft	3	4	4	3	4	3	3	4	4	3	4	5	45.6	3	3	57.6	Plus Bus in place

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DASTS STAGE 1 ASSESSMENT TABLE FOR PARK & RIDE MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PARK AND RIDE INTERVENTIONS		**MAJOR**																		
	1	**Providing improved journey times from park and ride to town centre**	**Soft / Infrastructure / Technology**	3	1	1	2	3	3	3	4	5	3	4	4	36.7	1	1	40.7	Telford does not currently have PnR
	2	**Park and ride to central locations (i.e. town centre)**	**Infrastructure / Soft**	3	2	2	2	3	2	4	4	5	3	4	4	39.0	3	3	51.0	Links to timing and delivery of town centre regeneration
	3	**Corridor infrastructure measures to give greater bus priority e.g. bus lanes, bus gates etc**	**Infrastructure**	3	1	1	2	3	2	2	4	4	4	4	3	32.9	1	1	36.9	Telford does not currently have PnR
		MINOR																		
	4	**Park and ride to non-central locations (e.g. hospitals)**	**Infrastructure / Soft**	3	2	2	2	3	2	2	4	4	3	4	4	35.0	1	2	41.0	Limited application due to ease of driving
	5	**Providing information and publicity**	**Soft**	3	1	1	1	3	3	3	3	3	4	3	5	33.3	1	2	39.3	Telford does not currently have PnR
	6	**Park and Cycle - e.g. ability to park and make onward cycle trip and/or cycle to the PandR and use secure cycle parking. Includes ability to leave own bike in secure storage overnight**	**Infrastructure / Soft**	3	3	3	3	3	3	3	3	3	3	4	4	39.5	2	1	45.5	Opportunity to park and cycle fits in with strong health programme at present
	7	**Park and Taxi e.g. to non-central locations**	**Infrastructure / Soft**	3	3	3	2	3	3	3	3	3	3	4	4	38.2	2	2	46.2	
	8	**Park and Share - e.g. parking and car share for longer distance journeys and/or to non-central locations**	**Infrastructure / Soft**	3	3	3	3	3	3	3	4	4	3	4	4	41.5	2	1	47.5	Might link to strategic car share on M54 corridor

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DASTS STAGE 1 ASSESSMENT TABLE FOR INTELLIGENT TRANSPORT SYSTEMS AND CAPACITY MANAGEMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
INTELLIGENT TRANSPORT SYSTEMS INTERVENTIONS		**MAJOR**																		
	1	**Bus, cycle & HOV lanes**	**Infrastructure**	4	5	4	4	3	3	3	4	4	4	4	5	48.4	4	4	64.4	In Telford bus and cycle lanes would work but not necessarily HOV lanes
	2	**Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight**	**Infrastructure/ Technology**	4	4	4	4	4	3	4	4	4	5	4	4	50.3	4	2	62.3	Enhanced movement of traffic and more effective use of network would be welcomed publicly
	3	**Real Time Passenger Information**	**Infrastructure / Technology**	3	4	4	4	4	3	3	4	4	4	4	4	47.0	4	3	61.0	Particularly important for bus strategy
	4	**Area Traffic Management (zone based)**	**Infrastructure / Technology**	3	3	3	3	3	2	2	4	5	4	4	5	40.9	2	2	48.9	One of the key barriers to implementing more sustainable measures in Telford is the legacy of the New Town layout built with easy access for the car in mind. This means that much of the legacy of public opinion today is dominated by the premise that the private car still has a dominant role to play in transport and access.
	5	**Active Traffic Management (radial/corridor based)**	**Infrastructure / Technology**	3	3	3	3	3	2	2	4	5	4	4	3	39.7	2	2	47.7	One of the key barriers to implementing more sustainable measures in Telford is the legacy of the New Town layout built with easy access for the car in mind. This means that much of the legacy of public opinion today is dominated by the premise that the private car still has a dominant role to play in transport and access.
	6	**Car Parking - intelligent signing and waymarking to reduce unnecessary circulation in the town centre system and to encourage filtration off at P and R sites**	**Infrastructure / Technology**	3	4	3	3	3	3	2	4	4	4	3	3	40.6	4	1	50.6	Would be welcomed - particularly in terms of access to employment areas and the town centre
	7	**Traffic Reduction by time of day or congestion level (e.g. 'ramp access' and 'access control' techniques)**	**Infrastructure / Technology**	3	2	2	2	2	3	4	3	5	4	5	3	39.0	2	2	47.0	One of the key barriers to implementing more sustainable measures in Telford is the legacy of the New Town layout built with easy access for the car in mind. This means that much of the legacy of public opinion today is dominated by the premise that the private car still has a dominant role to play in transport and access.
	8	**Traffic Reduction by vehicle type, size, weight**	**Infrastructure / Technology**	3	2	2	2	2	3	3	3	5	4	5	3	37.5	2	3	47.5	Heavy restraint would be resisted

DASTS STAGE 1 ASSESSMENT TABLE FOR PARKING STRATEGIES AND MANAGEMENT TOOL MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	Goal 2 - Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 - Improved quality of life and creation of sustainable communities	Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PARKING INTERVENTIONS		**MAJOR**																		
	1	Public Parking Control and Enforcement/Reduction in public parking provision	Infrastructure	3	3	3	2	2	3	4	2	3	4	2	3	36.5	3	2	46.5	Public resistance will be an issue
	2	Improved Car Parking Signage and Advance VMS Systems (inc strategic road network)	Infrastructure/ Technology	3	4	3	4	4	3	3	3	4	4	3	3	43.6	4	2	55.6	Improvements to helping Telford 'customers' would be welcomed
	3	Workplace Parking Levy	Policy	2	2	2	1	1	2	4	2	4	2	2	3	28.6	1	1	32.6	Limited scope due to public perception and way in which inward investment in the area has been developed
	4	Parking priority/charges related to type, weight or emission standards of vehicle.	Policy	1	2	3	1	1	3	3	3	4	4	3	4	32.7	3	3	44.7	Public resistance will be an issue
	5	De-criminalised Parking Enforcement.	Policy	3	3	4	3	3	3	3	3	3	2	2	3	38.1	3	1	46.1	Being looked into currently
	6	Parking bans in town centres/access entry control	Policy / Infrastructure	3	2	2	2	1	3	3	2	4	3	2	3	31.7	3	2	41.7	Strong public resistance will be likely
	7	Wholesale or partial (e.g. 'Residents only') parking bans	Policy	3	3	3	2	1	3	3	2	4	3	2	3	33.9	3	2	43.9	Strong public resistance will be likely
	8	'Tow-away zones'	Policy	3	3	3	1	1	3	2	2	3	2	2	3	29.4	1	1	33.4	Strong public resistance will be likely
	9	'Red Routes' and 'ClearWays'	Policy / Infrastructure	3	3	3	1	1	3	3	3	4	2	2	3	32.9	1	1	36.9	Strong public resistance will be likely
		MINOR																		
	10	Reducing Workplace Parking Provision/Charging at Workplace/Permit Systems - including cash out options for employees to give up parking spaces	Policy / Infrastructure	2	2	2	2	2	3	4	3	4	3	3	4	35.6	2	2	43.6	Public resistance will be an issue
	11	Car Sharing Parking Zones at Workplace	Policy / Infrastructure	5	4	4	4	4	3	3	3	4	3	3	4	46.6	3	4	60.6	Only if reinforced by a viable and sustained travel plan - note already in place
	12	Review Essential / Occasional Car user allowances e.g. public sector employers leading by example	Soft / Policy	4	4	3	2	1	3	4	3	3	3	3	4	38.6	2	3	48.6	Depends on Council and PCT leading by example - to be reviewed in Telford
	13	Flexible parking (mobility spaces) e.g. using Blue Badge and Parent and Toddler parking as a shared resource with ability to 'toggle' between each category through disc displays	Infrastructure	3	2	3	1	1	3	3	3	3	3	3	4	32.9	1	1	36.9	
	14	Quick (and safe) drop off / pick up parking spaces inc short stay spaces for employees at workplace	Infrastructure	4	4	3	3	3	3	3	3	3	3	3	4	40.9	2	1	46.9	Already in place
	15	Car parking standards in Dev Control / PNRP restrictions	Policy	4	4	4	4	4	3	3	3	4	3	4	3	45.6	4	4	61.6	Already covered in policy but needs to be 'matched' to any forthcoming travel plan and planning process guidance that is locally produced - currently promoting parking standards via CTAAP
	16	Local on-street charging policy	Policy	3	2	3	1	1	3	3	3	2	2	2	3	29.9	2	2	37.9	Public resistance will be an issue
	17	Local parking/waiting/loading restrictions	Policy	4	4	4	3	3	3	2	3	4	3	3	3	41.0	2	2	49.0	Already in place
	18	HGV parking bans	Policy / Infrastructure	3	1	3	1	3	3	3	2	2	4	3	0	30.8	1	1	34.8	

DASTS STAGE 1 ASSESSMENT TABLE FOR FREIGHT MANAGEMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
FREIGHT INTERVENTIONS		**MAJOR**																		
	1	Lorry route or Area wide bans	Soft / Technology / Infrastructure	3	1	3	1	2	3	3	4	4	5	5	3	38.6	3	1	46.6	Currently there are no problems with HGV routing in Telford
	2	Low/zero-emission zones	Soft / Technology	3	2	3	2	2	3	3	4	5	3	5	3	40.2	3	1	48.2	
	3	No-entry' or restricted entry areas (e.g. pedestrianisation)	Soft / Technology / Infrastructure	3	3	4	3	2	3	2	5	4	5	5	4	43.2	2	1	49.2	Pedestrianisation affects all vehicles not just freight
	4	Consolidation Centres to support town centre deliveries	Soft / Technology / Infrastructure	3	3	3	3	3	2	4	4	3	4	4	3	40.7	2	1	46.7	Could be considered as part of town centre regeneration but routes are 'free flow' at present
	5	Sustainable freight initiatives/logistics demonstration projects	Soft / Technology / Infrastructure	3	3	3	3	3	2	4	4	3	4	4	3	40.7	2	1	46.7	
		MINOR																		
	6	Other tele-services including home delivery	Soft / Technology	3	5	5	4	5	4	3	4	3	3	4	5	50.8	4	2	62.8	Already in place - prevents unnecessary local trips
	7	Fleet management advice to logistics companies/hauliers/SMEs	Soft / Technology	3	3	3	4	3	4	3	4	3	3	4	4	43.2	3	2	53.2	Already in place via EST, FTA, Carbon Trust etc
	8	Driver training (lower emissions and considerate driver programmes)	Soft	3	3	3	4	3	4	3	4	3	4	4	3	43.4	3	1	51.4	Already in place as above
	9	Mobile shops and home delivery schemes, mail order & web purchasing	Soft / Technology	3	3	3	4	3	2	3	4	3	3	4	5	40.8	3	2	50.8	Already in place - prevents unnecessary local trips

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DASTS STAGE 1 ASSESSMENT TABLE FOR WATER TRANSPORT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
		MINOR																		
WATER TRANSPORT INTERVENTIONS	1	**Commuter 'sail and ride'**	**Infrastructure**	1	1	1	1	1	1	2	3	4	3	4	3	23.9	1	1	27.9	No scope
	2	**Leisure water use**	**Soft**	1	0	0	1	0	1	1	3	3	3	5	4	19.1	1	2	25.1	No scope
	3	**Water transit for freight/heavy goods movement**	**Infrastructure**	1	1	1	1	4	1	1	3	5	3	3	3	26.5	1	1	30.5	No scope

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DASTS STAGE 1 ASSESSMENT TABLE FOR HIGHWAYS INFRASTRUCTURE AND NETWORK CAPACITY ENHANCEMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here technically?	Can it be delivered here organisationally (LA, key partners, politically)	Can it be delivered here public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 Economic Competitiveness and Growth	Goal 2 Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 Improved quality of life and creation of sustainable communities	Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
HIGHWAYS AND CAPACITY INTERVENTIONS		**MAJOR**																		
	1	Dualling of capacity (linear scheme)	Infrastructure	4	5	3	4	5	1	2	5	1	2	2	2	38.5	3	1	46.5	Amber - under consideration in order to improve quality of central area
	2	New part/full ring road (inner)	Infrastructure	3	3	3	4	5	3	2	3	1	2	2	2	36.5	4	3	50.5	Depends how inner ring road is defined. In Telford the aim is to improve the 'inner ring' road or 'Box Road' to make it more pedestrian/cycle friendly. Global benefits to town populations as all will need to access town centre at some point
	3	New part/full ring road (outer)	Infrastructure	4	4	3	4	5	3	2	3	1	2	2	2	38.5	4	2	50.5	The aim in Telford is to increase the capacity of the 'outer ring road' (Rampart Way/Hall Park Way) in order to make improvements to the 'Box Road'
	4	Strategic junction remodelling/capacity improvements	Infrastructure/ Technology	4	4	5	3	5	2	2	3	2	3	2	2	40.1	2	2	48.1	
	5	Strategic signalisation/ITS/UTMC system	Infrastructure/ Technology	4	4	3	3	3	3	3	4	3	4	3	3	42.1	3	3	54.1	
	6	Traffic platooning tools for key radials	Infrastructure/ Technology	3	4	3	3	3	3	3	4	3	4	3	3	41.1	3	3	53.1	
	7	Capacity enhancement along radials/tackling key pinchpoints	Infrastructure	4	4	5	3	5	1	2	3	2	2	1	1	36.6	3	3	48.6	Under consideration in order to improve quality of central area
	8	Strategic links to facilitate and access new development	Infrastructure	4	4	5	3	5	3	3	5	2	3	3	3	46.3	4	3	60.3	Reflects Telford as a location taking the most volume in housing and employment growth and 'powerhouse' role in terms of economic investment
	9	Improved access to strategic road network (new junctions etc)	Infrastructure	4	4	5	5	5	3	3	4	3	3	3	3	48.8	4	3	62.8	
	10	New road bridges	Infrastructure	4	4	5	5	5	1	2	3	2	1	2	2	39.5	2	1	45.5	
	11	Strategic Pinchpoint/network bottleneck schemes	Infrastructure	3	3	3	3	3	3	3	5	3	3	2	2	39.1	3	2	49.1	At present there are no location specific bottlenecks that if ynplugged will benefit both local and strategic traffic
	12	New bus only and or Ped/cycle bridges	Infrastructure	4	4	4	4	3	2	4	3	4	4	4	4	45.8	4	4	61.8	Would be a key element of a pro-bus strategy and would also facilitate direct and 'healthy travel' mode access to town centre and off centre/out of town employment areas. New town layout and space makes this a relatively easy option to pursue
		MINOR																		
	13	Site specific junction improvements on local networks	Infrastructure	4	5	5	3	5	3	3	3	3	4	3	2	46.5	2	1	52.5	
	14	Localised speed limits	Infrastructure	5	5	5	3	3	3	3	3	3	4	4	4	46.8	2	3	56.8	
	15	Localised traffic management schemes	Infrastructure	5	5	4	3	3	3	3	3	3	4	4	4	45.5	2	3	55.5	There would be greater support for TM schemes that provided additional road capacity rather than traffic calming schemes
	16	Banned rights turns etc to improve efficiency of key routes	Infrastructure	4	4	4	3	3	3	3	3	3	4	3	3	42.3	1	1	46.3	
	17	Changes to junction timings/flow	Infrastructure / Technology	4	4	4	3	3	3	3	3	3	4	3	3	42.3	2	1	48.3	

DASTS STAGE 1 ASSESSMENT TABLE FOR MANAGEMENT, MONITORING AND MEASUREMENT

		Intervention / Method (MAJOR/MINOR categories do not apply)	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	Goal 2 Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 Improved quality of life and creation of sustainable communities	Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
MANAGEMENT AND MEASUREMENT INTERVENTIONS	1	Traffic link and junction flow	Technology / Soft	3	3	4	3	3	3	0	4	3	4	4	2	36.8	4	3	50.8	Available
	2	Bus patronage	Soft	4	5	4	3	3	3	0	4	2	4	4	4	40.0	3	3	52.0	Monitored as part of NI 177
	3	Rail patronage	Soft	4	3	4	3	3	3	0	4	2	4	4	4	38.0	3	3	50.0	Rail patronage is not monitored at present. The Council would require resources to do so.
	4	Accident and Safety Data	Soft	5	5	4	3	3	3	0	3	2	5	4	4	40.8	4	1	50.8	Available
	5	Walking flows	Technology / Soft	4	4	4	3	3	2	0	4	3	4	4	4	38.5	2	1	44.5	Telford monitor 21 sites annually across the Borough for pedestrian and cycle flows and could monitor more if resources permitted
	6	Cycling flows	Technology / Soft	4	4	4	3	3	2	0	4	3	4	4	4	38.5	2	3	48.5	The Council monitor 21 sites annually across the Borough for pedestrian and cycle flows and could monitor more if resources permitted
	7	Trip Diary Records	Soft	3	4	4	2	3	1	0	4	0	4	5	5	33.0	1	1	37.0	Ad hoc survey data and linked into any Resi Travel Plan monitoring for new development sites
	8	Journey Time Reliability	Technology / Soft	3	4	4	3	3	2	0	4	4	3	4	4	37.7	3	3	49.7	HA data will be available for M54
	9	Journey Time	Technology / Soft	4	4	4	3	3	3	0	4	2	3	4	4	38.2	3	3	50.2	Telford have carried out journey time surveys as part of development of traffic models and would carry out when necessary to update the model. More surveys could be undertaken if resources permitted.
	10	Traffic speed	Technology / Soft	4	4	4	3	3	3	0	4	4	4	4	4	41.0	3	3	53.0	The Council carry out ad-hoc traffic speed surveys and could carry out more if resources permitted.
	11	Carbon reduction (inc other emissions)	Technology / Soft	4	4	4	3	3	2	0	1	5	2	4	3	35.3	3	3	47.3	The Council monitor air quality but as yet do not have any Air Quality Management Areas - note this monitoring is not comprehensive
	12	Travel Plan Surveys/Census - % response rate	Soft	3	4	4	3	3	3	0	4	4	4	5	4	40.6	2	2	48.6	Available
	13	Liftshare data	Soft	4	5	4	3	3	3	0	4	4	3	4	4	41.2	2	2	49.2	Telford have a Journeyshare system that allows a certain amount of monitoring
	14	Stated preference surveys	Soft	3	4	4	1	3	2	0	4	4	4	5	5	37.2	4	2	49.2	
	15	Personalised Travel Planning Results	Soft	3	4	4	1	3	2	0	4	4	4	5	5	37.2	3	3	49.2	
	16	Land Use Planning Decisions	Soft	3	4	4	3	3	3	0	3	4	3	4	4	38.2	3	3	50.2	Available
	17	Residential Travel Plan Incoming Resident surveys	Soft	3	4	4	3	3	3	0	4	4	4	5	5	41.2	3	3	53.2	Potential for this to be secured through residential travel plans under development for Linwood and Layton
	18	Park and Ride patronage	Soft	3	2	4	3	3	3	0	4	3	4	4	4	37.0	3	3	49.0	Telford do not currently have PnR
	19	Uptake of travel plan business advice	Soft	3	4	4	3	3	3	0	5	3	2	4	4	38.4	2	1	44.4	Available but relies on new 'push' to businesses (dependent on resources and promotion of Council's own improved travel plan)
	20	Numbers of people cycle trained	Soft	5	5	4	3	3	3	0	3	3	5	4	5	42.4	2	2	50.4	Available
	21	Numbers of people pedestrian trained	Soft	5	5	4	3	3	3	0	3	3	5	4	5	42.4	1	1	46.4	Available
	22	Number of cycle parking spaces provided	Soft	3	4	4	3	3	3	0	3	3	3	4	5	37.8	2	3	47.8	Through development and Council's capital programme
	23	Quality Bus Partnership	Soft	4	4	4	3	3	3	0	5	3	3	5	5	41.4	3	3	53.4	Telford has a very active Public Transport Partnership that includes rail as well as bus operators
	24	Freight Quality Partnership	Soft	3	4	4	3	3	2	0	5	3	2	5	3	36.9	2	2	44.9	No FQP in place
	25	Area Wide Travel Plan Forums/Networks	Soft	3	4	4	3	3	2	0	5	3	3	5	3	37.7	4	3	51.7	Potential to be developed through some of the area wide health initiatives
	26	Using National Indicator monitoring for transport data (direct and indirect)	Soft	4	5	4	3	3	3	0	3	4	4	4	4	41.0	4	2	53.0	

Appendix 5b Option Assessments - Shrewsbury

DASTS STAGE 1 ASSESSMENT TABLE FOR STRATEGIC GOVERNANCE, LEGISLATIVE AND FISCAL MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
STRATEGIC GOVERNANCE INTERVENTIONS		**DIRECT INTERVENTIONS - MAJOR**																		
	1	Road user charging (cordon) e.g. toll-based charges for crossing cordon point (as per London congestion charging zone)	Policy / technology	4	2	3	3	1	3	4	2	5	4	4	3	39.7	3	2	49.7	Requires national legislation/powers - unlikely to be supported locally but note technical case provided through TIF
	2	Road Pricing based on Vehicle emission Level - e.g. toll-based charges based on vehicle emission rating (using ANPR or other technology)	Policy / technology	4	2	1	3	1	3	4	2	5	4	4	3	37.2	3	2	47.2	Requires national legislation/powers - unlikely to be supported locally
	3	Bridge and entry gate tolls e.g. traditional charging model	Policy / technology	5	2	3	3	1	2	2	3	4	4	4	2	35.6	3	2	45.6	Refer to the Durham model - the historic core of Shrewsbury could work with its limited vehicular access points would lend itself to this approach. However little or no public support is likely
	4	'Congestion Management' zones e.g. area wide strategies to reduce car use/volume at peak times	Policy / technology	4	3	3	3	2	3	2	3	4	4	4	3	38.9	3	2	48.9	Refer to TIF evidence - potential for congestion management zone type approach for town centre based on timed restraint
	5	Road tolling and 'Pay per mile' in-vehicle metering schemes e.g. schemes based on duration of time spent/distance travelled on network	Policy / technology	3	2	1	2	1	3	2	2	4	4	4	3	30.9	3	2	40.9	Requires national legislation/powers and also technological solutions
	6	Vehicle emission standards and roadside testing - using local control mechanisms and fines to deter use of high emission vehicles on key corridors and/or in town centres	Policy / technology	4	3	3	3	3	5	3	3	5	4	4	3	45.7	4	1	55.7	As above
	7	Pay to drive schemes/car club i.e. reducing 2nd car ownership and use through easy to use pay as you go rental with all prices inclusive (as per London StreetCar scheme)	Policy / Soft	3	3	3	2	1	3	4	3	4	4	4	4	39.0	3	1	47.0	Car club in specific locations (e.g. city centre residential development) could work
		INDIRECT INTERVENTIONS - MINOR																		
	8	Business rates and inward investment subsidies to attract businesses e.g. use of enhanced rates (as per Business Improvement Districts) to make area wide travel plans viable	Policy	4	4	4	3	3	2	3	4	3	3	3	3	41.0	2	2	49.0	BID or TMA approach could be applied to town centre or larger clusters of employers
	9	Housing standards BREEAM/green influencers e.g. use of BREEAM/Ecobuild standard to ensure developers include sustainable travel and residential travel plans as an integral part of their scoring process)	Policy	4	4	4	3	3	2	3	4	4	4	5	4	44.6	3	1	52.6	The masterplanning/outline planning phase for new growth development sites will provide a strong opportunity to build in sustainable design and transport principles including strong support for sustainable access and mobility
	10	Provision of affordable housing of quantify/location to meet sustainability objectives e.g. ensuring % and mix of affordable homes is distributed in the optimum manner to encourage sustainable travel, skills assessment of incoming residents to assess proximity to jobs	Policy	4	4	4	3	3	2	3	4	4	4	5	5	45.2	3	1	53.2	The levels of affordable housing provision and the way in which it is distributed can have a positive effect on the viability of bus routes and other sustainable transport links

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DASTS STAGE 1 ASSESSMENT TABLE FOR SPATIAL PLANNING POLICY AND SUSTAINABLE LAND USE MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
SPATIAL POLICY INTERVENTIONS		**MAJOR**																		
	1	**Development Control Guidance/Policy for Smarter Choices e.g. locally relevant Supplementary Planning Document to reflect DfT Travel Plans and the Planning Process Guidance 2009**	**Policy**	**3**	**3**	**4**	**4**	**3**	**5**	**5**	**3**	**4**	**4**	**4**	**5**	**50.4**	**4**	**4**	**66.4**	Development of this tool would be a useful development of policy - Shrewsbury could deliver this type of approach the LTP currently provides this at a more strategic level but currently does not deal with the detail. The DfT Guidance on Travel Plans is currently the national starting position for this
	2	**CIL/interventions and Funding strategies - e.g. flexible Capital and Revenue Funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value**	**Policy**	**3**	**3**	**4**	**4**	**3**	**4**	**4**	**3**	**4**	**4**	**4**	**5**	**47.4**	**4**	**3**	**61.4**	Some resistance from developers but due to compactness of town could work well
	3	**Area Action Plans include sustainable travel interventions e.g. requirement for core sustainable transport infrastructure and area wide travel plans**	**Policy**	**3**	**4**	**4**	**4**	**3**	**3**	**3**	**4**	**4**	**4**	**5**	**5**	**47.0**	**4**	**3**	**61.0**	Area Action Plans remain a key tool that provide an opportunity to integrate wide area travel planning etc b - this is a timely opportunity for Shrewsbury
	4	**Flexibility in implementation of parking standards if smarter travel package is strong e.g. allowing a reduction in the number of spaces provided (no-car or low-car ratios)**	**Policy**	**4**	**5**	**3**	**3**	**2**	**3**	**4**	**4**	**4**	**4**	**4**	**5**	**46.1**	**2**	**1**	**52.1**	Flexibility and potential public acceptance. Note Shrewsbury football stadium

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DASTS STAGE 1 ASSESSMENT TABLE FOR VEHICLE TECHNOLOGY + DEVELOPMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
Vehicle Technology Interventions		**MAJOR**																		
	1	Control of use of commuter/personal trips to lower emission vehicles - e.g. using ANPR or other technology to encourage use of lower emission vehicles for commuter trips into town centres	Soft / Technology	2	2	2	2	3	2	2	2	4	4	4	3	32.2	3	2	42.2	Local authorities with parking controls determined on emission levels include London Borough of Richmond (parking permits/charges) and Woking Borough Council (parking permits for Council car parks)
	2	Lower emission vehicles for business and commercial use - e.g. encouraging use of electric/hybrid and other low carbon vehicles for business travel and for sustainable distribution	Soft / Technology	3	3	3	3	3	2	2	4	4	4	4	3	38.7	3	2	48.7	Local authority and large company policies (e.g. Amey's use of Prius vehicles for TfL London contract)
	3	Alternative fuel / hydrogen	Technology	2	2	1	1	1	1	2	3	4	4	4	3	26.7	1	1	30.7	
	4	Alternative power / electric	Technology	3	3	3	3	2	2	2	3	4	4	4	3	36.4	2	2	44.4	
	5	Increased choice of fuel via petrol station outlets through partnership with local outlets/increased publicity	Infrastructure	3	2	2	2	2	3	2	2	4	3	3	3	32.0	2	1	38.0	
	6	Provision of electric charging stations - e.g. public charging points and through the planning process	Infrastructure	3	3	3	3	3	3	2	2	4	4	4	4	38.8	2	1	44.8	Now being secured through the planning process .e.g.. Sainsbury's now installing sockets as part of their customer car parks
	7	Low emission buses - use of improved design and influence of commercial operators to procure low emission fleets via QBPs	Technology / Soft	3	2	4	3	3	3	2	2	4	4	4	3	38.4	2	1	44.4	Experiments in towns such as London and Bristol but supported by strong QBPs or stronger control
		MINOR																		
	8	Eco Driving Training Schemes - e.g. promotion of national EST programmes and/or local scheme development for rural based businesses	Soft	4	3	3	3	4	4	3	2	4	4	3	3	42.8	3	1	50.8	Currently available via Energy Savings Trust as part of wider logistics green fleet advice
	9	Vehicle fuel adaptation grants - as above with top-up from local sources	Soft	4	3	3	3	4	2	2	3	4	4	4	4	40.5	3	1	48.5	
	10	Alternative fuel / LPG e.g. local grant schemes on top of any central government scheme to promote use of vehicles	Soft	2	3	3	3	4	2	2	3	4	4	4	4	38.5	3	1	46.5	

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DASTS STAGE 1 ASSESSMENT TABLE FOR STRATEGIC SMARTER CHOICES / TRAVEL BEHAVIOUR MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scoring 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
STRATEGIC SMARTER CHOICES INTERVENTIONS		**MAJOR**																		
	1	**Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments**	**Soft**	4	5	5	4	3	4	4	3	4	4	5	5	52.2	5	4	70.2	Small pilot scheme in Bayston Hill quite successful and supports potential - On basis of town wide cycle demonstration town wide area smarter choices package would be a natural extension
	2	**Wide Area Travel Plans e.g. mixed use, commercial and industry/business park travel plans**	**Soft**	3	4	4	4	3	4	4	4	4	4	5	5	50.0	3	4	64.0	Evidence from Worcester again points to how it can work in a smaller settlement
	3	**Corridor Smarter Choices Tools - clustering smarter travel interventions along a given corridor (covering residential, school, workplace, cycle promotion etc)**	**Soft / Infrastructure**	3	4	3	3	3	3	3	4	4	4	5	5	44.5	3	2	54.5	There are physical limits as to how much can be retrofitted given space constraints on key corridors and within the town centre
	4	**Sustainable Travel Town 'blanket' approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes**	**Soft / Infrastructure**	4	5	4	4	4	4	3	5	4	4	5	5	52.7	5	4	70.7	Shrewsbury's layout would again support the application of the STT principle
	5	**Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc**	**Soft**	4	3	3	4	4	4	3	4	4	5	5	5	49.3	5	4	67.3	Links with PCT are strong within Shrewsbury so initiatives in this area are likely to generate shared support. This assumes that any structural and funding issues linked to PCTS are addressed in the long term and that smarter choices mechanisms can be planned for a 5-10 year sustainable timeframe

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DASTS STAGE 1 ASSESSMENT TABLE FOR TRAVEL PLAN MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
TRAVEL PLAN INTERVENTIONS		**MAJOR**																		
	1	Business Stakeholder Engagement/Advice/Travel Plan 'Forums'/'Transport Management Associations' & Business Improvement Zones - all providing longer term management of travel plans - secured via planning process	Soft	4	4	4	3	4	3	4	4	4	4	4	4	48.3	3	3	60.3	Depends upon continued resourcing for sustainable travel services and ensuring that existing levels of LA staffing are safeguarded in order to continue working proactively with businesses
	2	Planning-led travel plans including enforcement regime	Soft	4	5	4	4	4	4	4	4	4	4	4	4	52.0	3	4	66.0	Are a number of planning-;led travel plans written for Shrewsbury sites - ongoing performance and monitoring is an issue that will require addressing
	3	Workplaces/Hospitals/Universities/HE Sector travel plans	Soft	4	3	3	3	3	2	4	4	4	4	4	4	43.3	3	2	53.3	Main thrust of workplace travel plans rely on the Council and PCT leading by example
	4	Schools and Colleges Travel Plans	Soft	5	5	4	4	4	3	4	4	4	4	4	4	51.5	3	4	65.5	Strong legacy of success in the school travel arena with a particular lean towards cycling potential given the Cycling Town programme]
	5	Residential Travel Plans	Soft	3	4	4	4	4	4	4	4	4	4	4	5	50.6	3	4	64.6	Not exploited yet but there will be a key opportunity to consider the role of RTPs as part the housing sites coming forward through the LDF process
	6	Retail/tourism/sports/concert attractors Travel Plans	Soft	4	3	3	3	3	2	4	4	4	4	4	4	43.3	2	2	51.3	Note the Football Club have needed to considered sustainable transport issues
	7	Rail Station Travel Plans	Soft	3	4	4	3	3	3	4	4	4	4	4	4	46.0	3	2	56.0	Some potential given location of the station, very constrained parking, and the level of rail penetration in NSEW directions
	8	Developing/promoting a car sharing scheme inc emergency lift home for car sharers	Soft	4	3	5	3	3	3	3	4	4	4	4	4	45.8	3	3	57.8	Based on car share metrics the lack of a dedicated 'Shropshirecarshare.com' website is not adversely affecting performance/take-up although this could be considered in the future. Recognises heavily rural catchments of the town and addresses issues of bus penetration and accessibility to employment
	9	Charging staff to park/forcing to use public car parking due to demand management and space limitation/regulation	Soft	4	3	3	2	1	3	4	4	4	3	3	3	39.0	1	2	45.0	Shropshire Council are considering this as part of Council corporate travel plan development
		MINOR																		
	10	Flexi-working e.g. staggered hours, alterations to roster timebands, full flexitime with limited core hours	Soft	2	2	2	2	3	3	3	5	4	3	5	5	39.2	2	2	47.2	Appeals to larger scale organisations so likely to be effective within Shropshire Council and Hospital as lead advocates. Likely to have most % trip impact in these sectors but due to higher proportion of SME and medium sized businesses overall impact may be reduced
	11	Home working e.g. approved homeworker policies, ability for employees to 'mix and match' with time at workbase	Soft	4	4	3	2	4	3	3	4	5	4	5	4	45.9	2	2	53.9	As above, dependent on larger scale employers effecting the change first
	12	Tele-working and conferencing	Soft	3	4	3	2	4	3	4	5	5	4	4	4	46.8	2	2	54.8	Very flexible tool with very high BCR but depends on organisational culture and overcoming perceptions of low visibility = low productivity
	13	Video-conferencing	Soft	3	4	3	2	4	3	3	4	4	4	4	3	42.7	2	2	50.7	Higher levels of up-front investment needed associated with strong business case. Only likely to be viable for major employers with multiple sites either in Shrewsbury or regional/national companies with a branch in the town.. Potential for drop in business touchdown centre' where individuals could pay by hour
	14	Introducing employer Hot-desk policy e.g. reduction of desk capacity and operational footprint and reduction in car parking spaces	Soft	4	4	3	2	2	3	4	4	4	4	4	4	43.3	2	2	51.3	Proven case studies nationally where companies have chosen to consolidate activities on one site and increase 'productive footprint' through reduction in car parking capacity. This is scalable and can apply to smaller businesses
	15	Providing a car club/pool car facility - including use of residential car clubs to provide pool cars during the day for business	Soft	3	5	4	3	4	3	4	4	4	3	5	4	48.1	3	3	60.1	Based on compact nature of the town and the size/location of LDF housing growth thee is critical mass sufficient to support a flexible car club scheme that deals with leisure shopping, social and in-work travel
	16	Minibus/Maxi Taxi and Taxi Budi Schemes e.g. use of people carriers and taxis for 2-14/15 employees to share costs	Soft	3	3	3	3	3	3	3	3	3	3	3	4	38.9	2	2	46.9	Dispersed nature of employees would affect viability of such a scheme
	17	Grants/loans to develop on-site facilities e.g. cycle parking, showers etc	Soft	4	4	4	3	4	3	4	3	3	3	3	4	44.9	2	3	54.9	Helpful support measure but relies on area wide partnership and collaboration - and mainstreaming on travel plans within major organisations at a faster rate
	18	Employer low or no-cost ticket loan schemes e.g. Carnets, reduced commercial rates bus and rail	Infra	3	3	3	3	3	3	4	3	3	3	3	4	40.4	2	3	50.4	As above
	19	Vanpooling for business operations e.g. shared vans across a smaller industrial estate or 'incubator' centre	Soft	3	3	3	3	3	3	3	4	3	3	3	3	39.3	2	1	45.3	Limited capacity due to the diverse nature of businesses. Might work well as a pilot within a specific industrial area and/or as part of a wider 'pooling' scheme where employers should share pool bikes for personal and work use (e.g. to go shops at lunchtime)
	20	Progressive lease-car, business mileage allowance rates and AMAP limits	Soft	4	4	4	2	2	4	4	4	4	3	3	3	44.0	2	3	54.0	Depends on Shropshire Council leading by example and decisions on parking arrangements for Shire Hall etc

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DASTS STAGE 1 ASSESSMENT TABLE FOR PROMOTION AND MARKETING MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PROMOTION & MARKETING INTERVENTIONS		**MAJOR**																		
	1	**Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Liftshare Day, branding etc**	**Soft**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**2**	**4**	**4**	**4**	**3**	**54.2**	**4**	**2**	**66.2**	Already successfully delivered but focused on result outcomes through selective use of campaigns
	2	**Business carbon assessment**	**Soft**	**4**	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**5**	**4**	**4**	**2**	**43.1**	**2**	**1**	**49.1**	A valuable tool for all businesses and can be tailored according to the size of the organisation; reinforcement of this measure will come through business taxation nationally, and potentially through rates locally
	3	**Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information**	**Soft**	**5**	**5**	**4**	**4**	**4**	**3**	**4**	**3**	**4**	**5**	**5**	**4**	**51.9**	**3**	**3**	**63.9**	To date most campaigns have fitted in with established national programmes (linked to (1) above) The Cycling Town programme has provided Shrewsbury with an excellent opportunity to focus on a specific market and to optimise on health/cycling messages and to target key locations with enabling infrastructure
	4	**Area wide health promotion interventions including wellbeing, obesity and air quality issues**	**Soft**	**3**	**3**	**3**	**3**	**3**	**4**	**4**	**3**	**4**	**5**	**5**	**4**	**45.7**	**3**	**2**	**55.7**	Partnership with PCT already in place to deliver joint initiatives and messages. Active travel is particularly well advocated in schools, but workplace messages are diluted because of the lack of large single employers. Walking to school has been particularly successful in Shrewsbury
	5	**Green Branding to match culture of town / Lifestyle marketing e.g. targeted at residents who value historic/conservation aspects of the town**	**Soft**	**4**	**4**	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**4**	**5**	**3**	**43.3**	**3**	**1**	**51.3**	Shrewsbury has a strong 'green'/'eco-ethic' and market segments that would be reached through this type of messaging
		MINOR																		
	6	**Promotional information including timetables, maps literature, booklets, webpages, newsletters, noticeboards etc**	**Soft**	**2**	**2**	**3**	**4**	**3**	**5**	**3**	**3**	**4**	**3**	**4**	**4**	**42.7**	**5**	**1**	**54.7**	Support mechanism for wider initiatives
	7	**Personalised Travel Plans and Individualised Information for households or employees (support material)**	**Soft**	**4**	**5**	**5**	**5**	**5**	**4**	**4**	**3**	**4**	**4**	**4**	**4**	**54.8**	**5**	**3**	**70.8**	Implications for resourcing and would need to depend on Council staff to run this programme and market targets sectors would need to be identified. A key target tool
	8	**Personal Travel Carbon Calculator promotion of existing web-based resources to appeal to 'environmental ethical' target market which is growing**	**Soft**	**2**	**2**	**2**	**2**	**2**	**4**	**2**	**2**	**4**	**3**	**4**	**4**	**33.7**	**3**	**1**	**41.7**	On its own this type of tool would not be strong enough to achieve seed change in behaviour - awareness needs to hit at personal cost and be meshed with other initiatives
	9	**Longer Term Marketing Strategy including communications plan**	**Soft**	**3**	**4**	**4**	**4**	**4**	**4**	**2**	**3**	**3**	**3**	**3**	**3**	**43.0**	**1**	**1**	**47.0**	Would be a natural development of the robust Sustainable Travel work already being carried out by the team, enabling greater linkages with partners that can support 'in kind' by getting the sustainable travel options further mainstreamed within wider publicity

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DASTS STAGE 1 ASSESSMENT TABLE FOR WALKING / DDA ACCESS MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (L.A, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	Goal 2 Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 - Improved quality of life and creation of sustainable communities	Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
WALKING INTERVENTIONS		**MAJOR**																		
	1	**Improving pedestrian routes/crossings and connections - e.g. lighting, DDA etc**	**Infrastructure**	4	4	3	4	4	3	2	3	4	5	5	5	46.3	4	2	58.3	Need to focus on 'quality pedestrian corridors'
	2	**Walking buses for schools**	**Soft**	5	5	3	3	4	3	3	3	4	5	4	5	47.9	3	2	57.9	Walking buses already in place but always risk in securing and maintaining volunteers
	3	**Green Infrastructure links/short cuts (covering Footpaths/Bridleways/PROW/RUPPs/permissive routes/desire lines/alleys investment)**	**Infrastructure**	4	4	4	4	4	3	2	3	4	5	5	5	47.5	3	1	55.5	Links from urban fringe to open countryside and access to recreation/PROW network important given boundary of the town and location of planning expansion via the LDF process. Also improvement of short cuts and urban pedestrian linkages to give directness to key services and reduced walk times will be of benefit, particularly if these can be accessed via 'green lungs'
	4	**Aggressive use of Manual for Streets user hierarchy to make streets more pedestrian friendly including play streets, school zones, quiet lanes, woonerven/home zones, shared space etc**	**Infrastructure**	4	4	3	3	3	2	3	3	4	5	5	3	42.6	3	2	52.6	Certain locations have already benefited from this type of approach and have legacy for well used core pedestrian routes
	5	**Local traffic management/estate layouts that encourage active travel through directness and connectivity**	**Infrastructure**	4	5	5	4	5	2	3	3	4	5	5	3	49.8	2	3	59.8	Being demonstrated on one new development site - 'advantage' to pedestrians and cyclists have been secured through the planning process
	6	**Street design (surfaces, widths, pinch points, chicanes and vertical features) to discourage vehicles or slow them**	**Infrastructure**	4	4	3	2	3	3	3	3	4	4	4	3	41.4	2	1	47.4	As above - note that there are good example of sensitive traffic calming and pedestrian priority works already in place in Shrewsbury town centre
		MINOR																		
	7	**Pedestrian route map**	**Soft**	2	2	3	3	3	4	3	3	3	4	3	5	39.8	4	1	49.8	Can be used as a key 'tool' for discussions around sustainable transport
	8	**Walking support measures e.g. personal alarms/loan umbrellas, promotion of active travel, walking buddy schemes**	**Soft**	2	2	3	3	3	4	2	3	3	4	3	4	37.7	3	1	45.7	Successful if part of a major intervention such as travel plans, PTP etc
	9	**On site infrastructure improvements (showers/changing etc) inc DDA**	**Infrastructure**	4	4	4	3	4	4	3	4	4	4	4	5	48.9	2	2	56.9	Linked to on site travel plan investment
	10	**Pedestrian signage renewal and replacement - including improved legibility code**	**Infrastructure**	3	4	3	3	4	3	2	3	3	4	4	5	41.6	3	1	49.6	Town centre signage system is established and coherent; link routes into the town centre only have very limited ability for enhancement due to physical form and river crossings

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DASTS STAGE 1 ASSESSMENT TABLE FOR CYCLING ACCESS MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scoring 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
CYCLE ACCESS INTERVENTIONS		**MAJOR**																		
	1	Cycle route network improvement - including lighting/crossings and routes provided/improved to appropriate Bikeability standards/Safer Routes	Infrastructure/ Technology	5	5	4	4	3	3	3	4	4	5	5	5	50.8	5	4	68.8	Key part of Cycling Demonstration Town work and infrastructure programme
	2	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling - longer term potential	Infrastructure / Soft	4	5	4	5	4	3	4	4	4	5	5	5	53.8	5	4	71.8	Already in place with scope to synergise powerfully with other smarter choices/travel planning and wellbeing interventions
	3	Innovative signage (e.g. cycle responsive 'Think Bike')	Technology	3	4	4	4	3	4	3	3	3	5	3	3	44.9	3	2	54.9	Opportunity to develop within remaining Cycling Town programme
	4	Cycle route map	Soft	4	4	4	5	4	5	4	3	4	4	3	5	52.8	5	2	66.8	Cycle route map in place
		MINOR																		
	5	Staff discounts equipment and purchase for bikes e.g. supporting local independent traders - cycle2work etc	Soft	4	4	4	3	4	4	3	3	3	3	3	4	44.9	3	2	54.9	Supports travel planning and other similar initiatives
	6	Promoting cycling as a healthy way to travel inc cycle buddy and other support measures	Soft	3	3	3	3	3	5	3	3	3	4	4	5	43.9	4	3	57.9	Linked via PCT joint working
	7	On-site infrastructure improvements including secure cycle parking	Infrastructure	4	5	4	4	4	2	3	4	4	4	4	5	48.1	2	2	56.1	Grant scheme supports this intervention
	8	Public cycle hire (on-street) e.g. for occasional local users and for tourists/visitors	Infrastructure	3	2	3	2	4	2	2	4	4	3	4	5	38.1	1	1	42.1	Unlikely to be viable for Shrewsbury due to physical form and limited number of origins and destinations to generate demand turnover - Has been considered as part of Cycling Town programme
	9	Cycle Trains for schools	Soft	3	1	2	1	1	1	2	3	4	4	4	5	29.1	1	1	33.1	Limited potential given the specific journey to school catchment distances in Shrewsbury - primary school catchments are localised and short in distance - Secondary school catchments are too long and pupils will want to exercise independence

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DASTS STAGE 1 ASSESSMENT TABLE FOR PUBLIC TRANSPORT INNOVATION AND QUALITY - BUS MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (L.A, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	Goal 2 - Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 - Improved quality of life and creation of sustainable communities	Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PUBLIC TRANSPORT BUS INTERVENTIONS		**MAJOR**																		
	1	Bus priority schemes including corridor and location measures (bus gates)	Infrastructure	3	3	3	3	3	2	3	4	4	4	4	3	40.2	2	2	48.2	Bus signal priority particularly helpful in Shrewsbury as limited capacity for linear type improvements given space restrictions on radials and urban network
	2	Bus rail integration e.g.. physical interchange improvements, improved routing, better connections timings	Infrastructure	3	3	2	3	4	3	3	4	3	3	4	4	40.5	2	1	46.5	Scope to address as part of Station Travel Plan
	3	Improving accessibility to key locations by bus	Infrastructure / Soft	4	5	3	4	4	3	3	4	4	4	4	4	47.8	3	3	59.8	Given Cycling Town progress, need to assess whether future emphasis on accessibility should be based on better bus penetration/frequency or on further development of cycling (given approx 3 mile radius from town centre to urban fringe)
	4	Providing/ improving bus waiting facilities	Infrastructure	4	4	4	4	4	3	3	3	3	4	4	5	46.6	3	2	56.6	As above - further changes in population demographics (ageing population) is a consideration here
	5	Bus stations - new/improved	Infrastructure	3	4	4	4	4	2	3	3	3	4	4	3	42.9	3	1	50.9	
	6	Real-time bus information	Soft / Technology	4	4	2	4	4	3	3	3	3	3	4	3	42.1	3	3	54.1	Have already installed it in town centre and on key routes. However technically difficult to keep up to date and expensive. Decision been taken to turn off due to financial pressures.
	7	Better quality buses (tram style)	Technology / Infrastructure	4	4	4	3	5	2	2	3	3	4	4	3	42.4	2	1	48.4	New 'town size' buses introduced in early part of decade 2000-2003- linked with growth in bus use. Any new buses would need to be appropriate to size and scale of town streets - so smaller specification vehicles would be needed Routing and availability more important than bus specification
	8	Rapid Transit (dedicated or shared space)	Infrastructure	3	2	2	1	3	1	2	4	3	4	4	3	31.4	1	1	35.4	Insufficient demand to support a frequent rapid transit service. Also problems in finding space to run either on shared streets or dedicated tracks.
	9	Simplification of operations within the town e.g. managing impact of multioperator regimes and competition	Policy	3	2	2	2	3	3	3	3	2	3	3	3	33.8	1	1	37.8	Not really an issue as most if not all town services run by Arriva, some commercially and some on a subsidised basis.
	10	Recast bus network- Introduce cross town bus services and higher frequencies	Policy / Soft / Infrastructure	3	4	4	2	5	2	3	3	3	4	4	4	42.3	3	3	54.3	Most services currently terminate in the town centre, however most employment journeys require cross town or radial journeys
		MINOR																		
	11	Web and Phone Travel Info Services e.g. 'Traveline' and 'Transport Direct'	Soft / Technology	3	3	4	3	3	4	3	3	2	0	3	4	38.2	5	2	52.2	Already in place
	12	Public Transport Concessions/discounted fares	Soft	5	5	4	3	5	2	3	3	2	2	3	5	43.9	3	2	53.9	Introduction of concessionary fares for soaps has produced a significant increase in bus use. (although has also lead to increased cost for other users) Other measures to reduce cost of bus travel would be effective
	13	Inter-operator and Plus Bus ticket schemes (inc Smart Ticketing)	Soft	3	4	4	3	4	3	3	4	2	2	3	5	42.2	2	2	50.2	Plus Bus is already available but poorly advertised, Metrics on take up not readily available.
	14	'Quality Route' schemes and QBP	Infrastructure / Soft	4	4	3	3	3	2	2	3	3	2	3	3	36.5	2	1	42.5	Evidence of having positive effect on routes in Shropshire, increased patronage. However limited scope for introducing bus priority as insufficient space for bus lanes. Could give bus priority at signals using SCOOT.
	15	Demand Responsive Services	Soft	3	3	2	1	4	1	3	2	2	2	3	3	30.0	1	1	34.0	In place in rural areas for Shropshire. Not sure if it would work in the town as a general service- would be more costly and less direct than a regular bus service, Although already a ring and ride services for people with special mobility needs
	16	Bus revenue support and fuel duty rebates	Soft	4	4	4	3	4	2	2	3	3	1	3	3	38.2	1	2	44.2	Subsidised bus services already in place in the town. More funding for supporting more services would increase provision and use.
	17	Community, 'dial-a-ride' and works- bus services	Soft	4	4	4	3	4	3	2	3	3	3	4	5	43.1	1	1	47.1	Dial a ride service for mobility impaired people already in place

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DASTS STAGE 1 ASSESSMENT TABLE FOR RAIL MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scoring 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
RAIL INTERVENTIONS		**MAJOR**																		
	1	**Rail station upgrades and customer waiting improvement**	**Infrastructure**	4	3	3	3	3	1	3	4	3	4	4	4	39.3	1	2	45.3	Rail station has been upgraded in past via a partnership approach. Limited scope for further major improvements that would make much difference to demand
	2	**New rail station to meet local demand and projected growth**	**Infrastructure**	3	5	4	3	5	1	4	4	3	4	4	4	45.5	4	3	59.5	Shrewsbury Parkway station would provide improved access to rail for people in south of town, including from new urban extension
	3	**Promotion of new/adjusted services**	**Soft**	4	5	3	3	5	1	3	4	4	3	4	4	44.0	2	1	50.0	Evidence of Wrexham/Shropshire to Marylebone service is that new services that cater for an unmet demand will work
	4	**Rail station travel plan**	**Soft**	3	4	4	4	4	4	4	3	4	4	4	4	49.0	3	2	59.0	Need to look at the issue of rail station access including car parking - level of rail penetration to destinations outside the County is strong. Rail station travel plan would reduce level of unnecessary car trips into the town centre for onward travel by rail
		MINOR																		
	5	**Providing rail discounts**	**Soft**	3	4	3	5	5	3	3	4	3	3	4	5	47.1	4	2	59.1	Would be popular with public
	6	**Improving rail passenger capacity in peak**	**Infrastructure/ Soft**	3	1	2	2	2	2	4	4	3	3	4	4	34.7	2	2	42.7	Capacity at the station not really an issue in terms of passenger loadings
	7	**Inter-operator and 'OysterCard' schemes (Plus Bus)**	**Soft**	3	4	4	4	4	3	3	4	4	3	4	5	46.8	3	2	56.8	All rail services and bus services operated by Arrriva- so should be relatively simple for a combined bus and rail card scheme.

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DASTS STAGE 1 ASSESSMENT TABLE FOR PARK & RIDE MEASURES

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		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PARK AND RIDE INTERVENTIONS		**MAJOR**																		
	1	**Providing improved journey times from park and ride to town centre**	**Soft / Infrastructure/ Technology**	3	4	3	2	4	3	3	4	5	3	4	4	43.5	3	1	51.5	Insufficient space for bus lanes but could do bus priority at signals with SCOOT
	2	**Park and ride to central locations (i.e. town centre)**	**Infrastructure / Soft**	5	5	5	5	5	2	4	4	5	3	4	4	54.0	4	4	70.0	3 park and ride sites already operational. Need to consider a fourth site
	3	**Corridor infrastructure measures to give greater bus priority e.g. bus lanes, bus gates etc**	**Infrastructure**	3	2	2	1	1	1	2	4	4	4	4	3	29.9	3	1	37.9	Insufficient space for separate bus lanes
		MINOR																		
	4	**Park and ride to non-central locations (e.g. hospitals)**	**Infrastructure / Soft**	4	4	4	3	3	2	2	4	4	3	4	5	42.3	2	1	48.3	Trial from Oxon Park and Ride site to Shrewsbury General Hospital using regular service bus, some take up. Could work for locations where charges for car parking
	5	**Providing information and publicity**	**Soft**	4	3	3	3	3	3	3	3	3	4	3	5	41.3	2	1	47.3	
	6	**Park and Cycle - e.g. ability to park and make onward cycle trip and/or cycle to the PandR and use secure cycle parking. Includes ability to leave own bike in secure storage overnight**	**Infrastructure / Soft**	3	3	3	3	3	3	3	3	3	3	4	4	39.5	2	1	45.5	May require upgrades in cycle route to park and ride sites
	7	**Park and Taxi e.g. to non-central locations**	**Infrastructure / Soft**	3	3	3	3	3	3	3	3	3	3	4	4	39.5	2	1	45.5	May not work due to relatively short distances, limited number of locations where there are car park charges
	8	**Park and Share - e.g. parking and car share for longer distance journeys and/or to non-central locations**	**Infrastructure / Soft**	3	3	3	3	3	3	3	4	4	3	4	4	41.5	2	1	47.5	May not work due to relatively short distances, limited number of locations where there are car park charges. Would mainly benefit strategic trips to out of County locations (Telford, Birmingham, South Wales etc)

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DASTS STAGE 1 ASSESSMENT TABLE FOR INTELLIGENT TRANSPORT SYSTEMS AND CAPACITY MANAGEMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
INTELLIGENT TRANSPORT SYSTEMS INTERVENTIONS		**MAJOR**																		
	1	**Bus, cycle & HOV lanes**	**Infrastructure**	3	3	2	2	3	3	3	4	4	4	4	5	40.4	2	2	48.4	Some scope for cycle lanes (looked as part of Cycling Town) but most roads have insufficient space to provide bus or HOV lanes
	2	**Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight**	**Infrastructure / Technology**	3	5	4	2	4	3	4	4	4	5	4	4	47.8	3	4	61.8	Proposed way forward to increase capacity and provide bus priority
	3	**Real Time Passenger Information**	**Infrastructure / Technology**	4	4	2	3	3	1	3	4	4	4	4	4	40.0	2	1	46.0	Have already installed it in town centre and on key routes. However technically difficult to keep up to date and expensive. Decision been taken to turn off due to financial pressures.
	4	**Area Traffic Management (zone based)**	**Infrastructure / Technology**	3	4	3	3	4	2	2	4	5	4	4	5	43.1	2	2	51.1	Linked to town centre traffic fow management and giving pedestrians greater priority at certain times of day
	5	**Active Traffic Management (radial/corridor based)**	**Infrastructure / Technology**	3	4	3	2	4	2	2	4	5	4	4	3	40.7	2	2	48.7	
	6	**Car Parking - intelligent signing and waymarking to reduce unnecessary circulation in the town centre system and to encourage filtration off at P and R sites**	**Infrastructure / Technology**	3	5	4	5	5	3	2	4	4	4	3	3	47.8	4	1	57.8	Would be useful to stop cross town centre journeys and encourage greater use of park and ride
	7	**Traffic Reduction by time of day or congestion level (e.g. 'ramp access' and 'access control' techniques)**	**Infrastructure / Technology**	3	1	1	1	1	3	4	3	5	4	5	3	34.3	2	2	42.3	Not relevant for trips wiothin the town but will be of benefit ref impact on the HA SRN arising from new development
	8	**Traffic Reduction by vehicle type, size, weight**	**Infrastructure / Technology**	3	4	3	1	2	3	3	3	5	4	5	5	40.7	3	1	48.7	Already height restrictions in part of town centre due to low bridge- keeps much heavy traffic out. Could consider restrictions based on emissions in town centre air quality management zone

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DASTS STAGE 1 ASSESSMENT TABLE FOR PARKING STRATEGIES AND MANAGEMENT TOOL MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
PARKING INTERVENTIONS		**MAJOR**																		
	1	Public Parking Control and Enforcement/Reduction in public parking provision	Infrastructure	4	4	4	3	1	3	4	2	3	4	2	3	39.7	3	2	49.7	
	2	Improved Car Parking Signage and Advance VMS Systems (inc strategic road network)	Infrastructure / Technology	3	5	4	4	5	3	3	3	4	4	3	3	47.1	3	1	55.1	Would be useful to stop cross town centre journeys and encourage greater use of park and ride as a coherent strategy
	3	Workplace Parking Levy	Policy	3	5	4	2	1	3	4	3	4	2	2	3	38.9	3	5	54.9	Definitely worth considering. Would need to apply across town and not just in town centre as there are many employment sites out of the town centre
	4	Parking priority/charges related to type, weight or emission standards of vehicle.	Policy	3	2	3	3	2	3	3	3	4	4	3	4	38.4	3	2	48.4	
	5	De-criminalised Parking Enforcement.	Policy	4	4	5	3	3	3	3	3	3	2	2	3	41.4	3	3	53.4	Has been introduced since 2008. Has been a cut back in enforcement due to public pressure that wardens may have been 'over-enforcing'
	6	Parking bans in town centres/access entry control	Policy / Infrastructure	3	2	2	2	2	3	3	2	4	3	2	3	32.9	2	2	40.9	Already very limited on street parking in town centre (very short stay or disabled customers only) However major car parks are located in the town centre, including main multi storey car park which act as a key magnet.
	7	Wholesale or partial (e.g. 'Residents only') parking bans	Policy	3	4	3	2	2	3	3	2	4	3	3	3	36.8	3	2	46.8	Has been considered and consulted upon using a trial area just outside the town centre but not taken forward as insufficient local support. at the time. Main problem was the cost to residents for very little benefit (i.e. no ability to guarantee a parking space) . Would need a revenue support scheme to fund rather than expect to be self funding
	8	'Tow-away zones'	Policy	3	3	3	2	2	3	2	2	3	2	2	3	31.9	2	1	37.9	
	9	'Red Routes' and 'ClearWays'	Policy / Infrastructure	3	3	3	2	2	3	3	3	4	2	2	3	35.4	2	1	41.4	
		MINOR																		
	10	Reducing Workplace Parking Provision/Charging at Workplace/Permit Systems - including cash out options for employees to give up parking spaces	Policy / Infrastructure	3	3	3	3	2	3	4	3	4	3	3	4	40.1	3	4	54.1	Works in tandem with travel planning interventions
	11	Car Sharing Parking Zones at Workplace	Policy / Infrastructure	4	4	3	3	3	3	3	3	4	3	3	4	41.9	3	3	53.9	Council can consider as part of refreshed Shire Hall Travel Plan - Low score reflects these interventions are dependent on the major strategic interventions being put in place first
	12	Review Essential / Occasional Car user allowances e.g. public sector employers leading by example	Soft/Policy	3	4	4	2	2	3	4	3	4	3	3	4	41.1	3	3	53.1	Low score reflects these interventions are dependent on the major strategic interventions being put in place first
	13	Flexible parking (mobility spaces) e.g. using Blue Badge and Parent and Toddler parking as a shared resource with ability to 'toggle' between each category through disc displays	Infrastructure	3	3	3	3	2	3	3	3	3	3	3	4	37.6	1	2	43.6	Low score reflects these interventions are dependent on the major strategic interventions being put in place first and relatively smal sector
	14	Quick (and safe) drop off / pick up parking spaces inc short stay spaces for employees at workplace	Infrastructure	3	3	3	3	3	3	3	3	3	3	3	4	38.9	1	2	44.9	Low score reflects these interventions are dependent on the major strategic interventions being put in place first
	15	Car parking standards in Dev Control / PNRP restrictions	Policy	4	4	4	4	3	3	3	3	3	3	3	3	42.8	3	4	56.8	Key instrument but may be reluctance to be too aggressive due to economic competition with other centres
	16	Local on-street charging policy	Policy	4	4	4	3	2	3	3	3	2	2	2	3	37.9	2	2	45.9	Already in place in some locations
	17	Local parking/waiting/loading restrictions	Policy	4	4	4	3	2	3	2	2	2	2	3	3	36.0	2	2	44.0	Low score reflects these interventions are dependent on the major strategic interventions being put in place first
	18	HGV parking bans	Policy / Infrastructure	3	3	2	3	2	3	3	2	2	4	3	0	32.8	2	1	38.8	Low score reflects these interventions are dependent on the major strategic interventions being put in place first

DASTS STAGE 1 ASSESSMENT TABLE FOR FREIGHT MANAGEMENT MEASURES

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		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	Goal 2 - Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 - Improved quality of life and creation of sustainable communities	Goal 5 = Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor - Size of Market affected by Intervention	Scalability Factor - Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
FREIGHT INTERVENTIONS		**MAJOR**																		
	1	**Lorry route or Area wide bans**	**Soft / Technology / infrastructure**	3	3	3	3	3	3	3	4	4	5	5	3	43.1	2	1	49.1	Improved management of freight traffic will bring wider environmental benefits to the town centre
	2	**Low/zero-emission zones**	**Soft / Technology**	3	3	2	3	3	3	3	4	5	3	5	4	41.8	3	1	49.8	Linkd to AQMA and control of asccess for vehicles by emission classifcation
	3	**No-entry' or restricted entry areas (e.g. pedestrianisation)**	**Soft / Technology / infrastructure**	4	4	2	3	3	3	2	5	4	5	5	4	43.9	2	1	49.9	
	4	**Consolidation Centres to support town centre deliveries**	**Soft / Technology / infrastructure**	3	4	3	3	3	2	4	4	4	4	4	3	42.7	2	1	48.7	Valuable to town centre and out of town logistics/industrial locations
	5	**Sustainable freight initiatives/logistics demonstration projects**	**Soft / Technology / infrastructure**	3	3	3	3	3	2	4	4	4	3	5	4	42.1	2	1	48.1	This sector requires attention moving forward - both in terms of town centre access and deliveries and access to logistics/freight from the Strategic Road Network
		MINOR																		
	6	**Other tele-services including home delivery**	**Soft / Technology**	4	4	4	3	4	4	3	4	3	3	4	5	47.1	4	1	57.1	
	7	**Fleet management advice to logistics companies/hauliers/SMEs**	**Soft / Technology**	3	3	3	3	4	4	3	4	3	3	4	4	43.2	3	1	51.2	
	8	**Driver training (lower emissions and considerate driver programmes)**	**Soft**	4	4	4	3	4	4	3	4	5	4	4	3	48.7	2	1	54.7	
	9	**Mobile shops and home delivery schemes, mail order & web purchasing**	**Soft / Technology**	4	4	4	3	4	2	3	4	3	3	4	5	44.1	2	1	50.1	

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DASTS STAGE 1 ASSESSMENT TABLE FOR WATER TRANSPORT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 - Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 Improved safety, security and health	DaSTS Sensecheck: Goal 4 - Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
		MINOR																		
WATER TRANSPORT INTERVENTIONS	1	**Commuter 'sail and ride'**	**Infrastructure**	**3**	**2**	**2**	**2**	**2**	**1**	**2**	**3**	**4**	**3**	**4**	**3**	**30.6**	**1**	**1**	**34.6**	River has very limited places for landing which reduces practicalities of use for river transport. Navigable length limited by a weir just east of town centre. The river would not provide a practical option for 'travel' only supported limited sight seeing role
	2	**Leisure water use**	**Soft**	**3**	**2**	**2**	**2**	**3**	**1**	**1**	**3**	**3**	**3**	**5**	**4**	**30.6**	**1**	**1**	**34.6**	river would not provide a practical option for 'travel' only supported limited sight seeing role
	3	**Water transit for freight/heavy goods movement**	**Infrastructure**	**3**	**1**	**1**	**2**	**3**	**1**	**1**	**3**	**5**	**3**	**3**	**3**	**28.5**	**1**	**1**	**32.5**	river does not serve right areas of town

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DASTS STAGE 1 ASSESSMENT TABLE FOR HIGHWAYS INFRASTRUCTURE AND NETWORK CAPACITY ENHANCEMENT MEASURES

		Intervention	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here technically?	Can it be delivered here organisationally (LA, key partners, politically)	Can it be delivered here public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scoring 3)	DaSTS Sensecheck: Goal 1 Economic Competitiveness and Growth	Goal 2 Reduction in CO2 and other greenhouse gases	Goal 3 - Improved safety, security and health	Goal 4 Improved quality of life and creation of sustainable communities	Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
HIGHWAYS AND CAPACITY INTERVENTIONS		**MAJOR**																		
	1	**Dualling of capacity (linear scheme)**	**Infrastructure**	3	2	1	2	2	1	2	4	1	2	2	2	24.8	3	1	32.8	Insufficient space within town to increase road widths.
	2	**New part/full ring road (inner)**	**Infrastructure**	3	2	2	2	3	2	2	3	1	2	2	2	27.8	4	2	39.8	Use would be limited and environmental impacts including noise very significant
	3	**New part/full ring road (outer)**	**Infrastructure**	3	4	4	4	4	4	2	3	2	2	2	2	40.0	5	5	60.0	Would encourage more journeys to be made across town and by car as would reduce journey times. - would support freight strategy and ease access for new development
	4	**Strategic junction remodelling/capacity improvements**	**Infrastructure / Technology**	3	3	3	3	3	2	2	3	2	3	2	2	33.1	3	1	41.1	Limited scope due to lack of space at most junctions
	5	**Strategic signalisation/ITS/UTMC system**	**Infrastructure / Technology**	3	4	4	4	3	3	3	4	3	4	3	3	43.6	3	2	53.6	Could work- has worked in Stafford which is a similar sized town
	6	**Traffic platooning tools for key radials**	**Infrastructure / Technology**	3	5	4	4	4	3	3	4	3	4	3	3	45.8	3	3	57.8	Proposed way forward to increase capacity and provide bus priority
	7	**Capacity enhancement along radials/tackling key pinchpoints**	**Infrastructure**	3	3	3	2	3	1	2	3	2	2	1	1	28.3	2	3	38.3	Limited scope due to lack of space at most junctions
	8	**Strategic links to facilitate and access new development**	**Infrastructure**	3	5	4	5	4	3	3	5	2	3	3	3	46.3	4	3	60.3	Would be necessary for new urban extensions. Need to be designed in such a way as to encourage sustainable travel
	9	**Improved access to strategic road network (new junctions etc)**	**Infrastructure**	3	4	4	5	4	3	3	4	3	3	3	3	45.3	4	3	59.3	May be necessary for new urban extensions. Need to be designed in such a way as to encourage sustainable travel
	10	**New road bridges**	**Infrastructure**	3	3	3	2	3	1	2	3	2	1	2	2	28.7	3	1	36.7	Would encourage more journeys to be made across town and by car as would reduce journey times.
	11	**Strategic Pinchpoint/network bottleneck schemes**	**Infrastructure**	3	3	3	4	4	4	3	5	3	3	2	2	43.1	4	1	53.1	Location specific bottlenecks that if unplugged will benefit both local and strategic traffic
	12	**New bus only and or Ped/cycle bridges**	**Infrastructure**	4	4	4	3	3	2	4	4	4	4	4	4	45.5	3	3	57.5	Should be considered as complementary to the NWRR to provide fast direct sustainable links between west and north of town and give direct advantage on journey times to bus/cycle (and potentially car share)
		MINOR																		
	13	**Site specific junction improvements on local networks**	**Infrastructure**	3	4	3	3	4	3	3	3	3	4	3	2	40.7	2	1	46.7	Limited scope due to lack of space at most junctions
	14	**Localised speed limits**	**Infrastructure**	4	4	3	3	4	3	3	3	3	5	5	4	44.9	2	2	52.9	
	15	**Localised traffic management schemes**	**Infrastructure**	4	4	3	3	4	3	3	3	3	4	4	4	43.5	2	2	51.5	
	16	**Banned rights turns etc to improve efficiency of key routes**	**Infrastructure**	3	4	2	2	3	3	3	3	3	4	3	3	37.6	2	1	43.6	Limited scope
	17	**Changes to junction timings/flow**	**Infrastructure/ Technology**	3	4	3	3	3	3	3	3	3	4	3	3	40.1	2	2	48.1	

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DASTS STAGE 1 ASSESSMENT TABLE FOR MANAGEMENT, MONITORING AND MEASUREMENT

		Intervention / Method (MAJOR/MINOR categories do not apply)	Type of measure	Has it worked (evidence can be national or local)	Can it work here (i.e. this town)	Can it be delivered here - technically?	Can it be delivered here - organisationally (LA, key partners, politically)	Can it be delivered here - public/customer acceptability?	Affordability?	Benefit to Cost Ratio (>4:1 as average baseline scording 3)	DaSTS Sensecheck: Goal 1 - Economic Competitiveness and Growth	DaSTS Sensecheck: Goal 2 Reduction in CO2 and other greenhouse gases	DaSTS Sensecheck: Goal 3 - Improved safety, security and health	DaSTS Sensecheck: Goal 4 Improved quality of life and creation of sustainable communities	DaSTS Sensecheck: Goal 5 Equality of opportunity and enhanced social inclusion	OVERALL DASTS STAGE 1 SCORE (columns F - Q)	Scalability Factor Size of Market affected by Intervention	Scalability Factor Impact on Mode Shift	ADJUSTED DASTS STAGE 1 SCORE (columns S and T applied to column R)	Evidence/Commentary
MANAGEMENT AND MEASUREMENT INTERVENTIONS	1	Traffic link and junction flow	Technology / Soft	5	5	4	3	3	3	0	4	3	4	4	2	40.8	4	3	54.8	Available
	2	Bus patronage	Soft	5	5	3	3	3	3	0	4	2	4	4	4	39.8	3	3	51.8	Available
	3	Rail patronage	Soft	5	5	3	3	3	3	0	4	2	4	4	4	39.8	3	3	51.8	Available
	4	Accident and Safety Data	Soft	5	5	3	3	3	3	0	3	2	5	4	4	39.6	4	1	49.6	Available
	5	Walking flows	Technology / Soft	5	5	3	3	3	2	0	4	3	4	4	4	39.3	2	1	45.3	Available
	6	Cycling flows	Technology / Soft	5	5	4	3	3	2	0	4	3	4	4	4	40.5	2	3	50.5	Available with enhanced intelligence as a result of Cycling Town
	7	Trip Diary Records	Soft	5	3	3	3	3	1	0	4	0	4	5	5	34.0	1	1	38.0	Intelligence available from the Shrewsbury TIF bid
	8	Journey Time Reliability	Technology / Soft	5	3	3	3	3	2	0	4	4	3	4	4	37.5	3	3	49.5	Available via the HA for the SRN
	9	Journey Time	Technology / Soft	5	3	3	3	3	3	0	4	2	3	4	4	37.0	3	3	49.0	Available
	10	Traffic speed	Technology / Soft	5	3	3	3	3	3	0	4	4	4	4	4	39.8	3	3	51.8	Available
	11	Carbon reduction (inc other emissions)	Technology / Soft	4	3	3	3	3	2	0	1	5	2	4	3	33.1	3	3	45.1	Can be derived from travel plan data (e.g. County Hal travel l survey 2010)
	12	Travel Plan Surveys/Census - % response rate	Soft	5	5	3	3	3	3	0	4	4	4	5	4	42.4	2	2	50.4	PCT and Council surveys will be the most robust
	13	Liftshare data	Soft	5	5	3	3	3	3	0	4	4	3	4	4	41.0	2	2	49.0	Available
	14	Stated preference surveys	Soft	5	3	3	3	3	2	0	4	4	4	5	5	39.5	4	2	51.5	Available
	15	Personalised Travel Planning Results	Soft	4	5	3	3	3	2	0	4	4	4	5	5	40.5	3	3	52.5	Could bolt onto development of Council's own staff travel plan
	16	Land Use Planning Decisions	Soft	4	3	3	3	3	3	0	3	4	3	4	4	37.0	3	3	49.0	Automatically monitored through registration systems
	17	Residential Travel Plan Incoming Resident surveys	Soft	4	5	3	3	3	3	0	4	4	4	5	5	42.0	3	3	54.0	Capable of being required through the planning process and strengthened through the SPD process if this is taken forward
	18	Park and Ride patronage	Soft	5	5	5	3	3	3	0	4	3	4	4	4	43.3	3	3	55.3	Available via the HA for the SRN
	19	Uptake of travel plan business advice	Soft	4	4	5	3	4	3	0	5	3	2	4	4	41.9	2	1	47.9	Available
	20	Numbers of people cycle trained	Soft	5	5	5	3	4	3	0	3	3	5	4	5	44.9	2	2	52.9	Available with enhanced data from Cycling Town
	21	Numbers of people pedestrian trained	Soft	4	3	3	3	4	3	0	3	3	5	4	5	39.4	1	1	43.4	PCT would provide data on this metric
	22	Number of cycle parking spaces provided	Soft	5	5	5	3	4	3	0	3	3	3	4	5	43.3	2	3	53.3	Monitored through planning applications/workplace travel plan audits and Cycling Town intelligence
	23	Quality Bus Partnership	Soft	4	3	3	3	3	3	0	5	3	3	5	5	39.2	3	3	51.2	Available
	24	Freight Quality Partnership	Soft	3	3	3	0	3	2	0	5	3	2	5	3	30.9	2	2	38.9	N/A at present
	25	Area Wide Travel Plan Forums/Networks	Soft	5	5	3	3	3	2	0	5	3	3	5	3	39.5	4	3	53.5	Limited data available at present
	26	Using National Indicator monitoring for transport data (direct and indirect)	Soft	3	3	3	3	3	3	0	3	4	4	4	4	36.8	4	2	48.8	To be determined

Appendix 5c Option Assessments - Hereford

Appendix 6: Option evaluation RAG Scores for each settlement

DASTS STAGE 1 ASSESSMENT TABLE FOR STRATEGIC GOVERNANCE, LEGISLATIVE AND FISCAL MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
STRATEGIC GOVERNANCE INTERVENTIONS		**DIRECT INTERVENTIONS - MAJOR**				
	1	Road user charging (cordon) e.g. toll-based charges for crossing cordon point (as per London congestion charging zone)	Policy/technology	46.9	49.7	49.2
	2	Road Pricing based on Vehicle emission Level - e.g. toll-based charges based on vehicle emission rating (using ANPR or other technology)	Policy/technology	46.9	47.2	49.2
	3	Bridge and entry gate tolls e.g. traditional charging model	Policy/technology	37.8	45.6	41.1
	4	'Congestion Management' zones e.g. area wide strategies to reduce car use/volume at peak times	Policy/technology	43.9	48.9	45.7
	5	Road tolling and 'Pay per mile' in-vehicle metering schemes e.g. schemes based on duration of time spent/distance travelled on network	Policy/technology	40.7	40.9	38.9
	6	Vehicle emission standards and roadside testing - using local control mechanisms and fines to deter use of high emission vehicles on key corridors and/or in town centres	Policy/technology	50.7	55.7	49.2
	7	Pay to drive schemes/car club i.e. reducing 2nd car ownership and use through easy to use pay as you go rental with all prices inclusive (as per London StreetCar scheme)	Policy/Soft	46.8	47.0	49.8
		INDIRECT INTERVENTIONS - MINOR				
	8	Business rates and inward investment subsidies to attract businesses e.g. use of enhanced rates (as per Business Improvement Districts) to make area wide travel plans viable	Policy	48.5	49.0	49.3
	9	Housing standards BREEAM/green influencers e.g. use of BREEAM/Could standard to ensure developers include sustainable travel and residential travel plans as an integral part of their scoring process)	Policy	57.1	52.6	52.6
	10	Provision of affordable housing of quantify/location to meet sustainability objectives e.g. ensuring % and mix of affordable homes is distributed in the optimum manner to encourage sustainable travel, skills assessment of incoming residents to assess proximity to jobs	Policy	56.7	53.2	53.2

DASTS STAGE 1 ASSESSMENT TABLE FOR SPATIAL PLANNING POLICY AND SUSTAINABLE LAND USE MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
SPATIAL POLICY INTERVENTIONS		MAJOR				
	1	Development Control Guidance/Policy for Smarter Choices e.g. locally relevant Supplementary Planning Document to reflect DfT Travel Plans and the Planning Process Guidance 2009	Policy	69.1	66.4	66.6
	2	CIL/interventions and Funding strategies - e.g. flexible Capital and Revenue Funding within Section 106 agreements that does not prescribe the transport package at the outset of the development but enables measures to be funded according to their outcome value	Policy	63.6	61.4	64.6
	3	Area Action Plans include sustainable travel interventions e.g. requirement for core sustainable transport infrastructure and area wide travel plans	Policy	59.0	61.0	47.7
	4	Flexibility in implementation of parking standards if smarter travel package is strong e.g. allowing a reduction in the number of spaces provided (no-car or low-car ratios)	Policy	46.4	52.1	48.1

DASTS STAGE 1 ASSESSMENT TABLE FOR VEHICLE TECHNOLOGY + DEVELOPMENT MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
VEHICLE TECHNOLOGY + DEVELOPMENT INTERVENTIONS		MAJOR				
	1	Control of use of commuter/personal trips to lower emission vehicles - e.g. using ANPR or other technology to encourage use of lower emission vehicles for commuter trips into town centres	Soft/Technology	42.7	42.2	34.2
	2	Lower emission vehicles for business and commercial use - e.g. encouraging use of electric/hybrid and other low carbon vehicles for business travel and for sustainable distribution	Soft/Technology	47.4	48.7	36.7
	3	Alternative fuel / hydrogen	Technology	30.7	30.7	31.7
	4	Alternative power / electric	Technology	39.9	44.4	40.7
	5	Increased choice of fuel via petrol station outlets through partnership with local outlets/increased publicity	Infrastructure	40.0	38.0	40.0
	6	Provision of electric charging stations - e.g. public charging points and through the planning process	Infrastructure	46.8	44.8	45.5
	7	Low emission buses - use of improved design and influence of commercial operators to procure low emission fleets via QBPs	Technology/Soft	48.4	44.4	49.2
		MINOR				
	8	Eco Driving Training Schemes - e.g. promotion of national EST programmes and/or local scheme development for rural based businesses	Soft	48.8	50.8	47.6
	9	Vehicle fuel adaptation grants - as above with top-up from local sources	Soft	46.5	48.5	46.5
	10	Alternative fuel / LPG e.g. local grant schemes on top of any central government scheme to promote use of vehicles	Soft	44.5	46.5	44.5

DASTS STAGE 1 ASSESSMENT TABLE FOR STRATEGIC SMARTER CHOICES / TRAVEL BEHAVIOUR MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
STRATEGIC SMARTER CHOICES INTERVENTIONS		MAJOR				
	1	Personalised Travel Planning - area-wide PTP programmes targeted at specific market segments	Soft	72.5	70.2	65.2
	2	Wide Area Travel Plans e.g. mixed use, commercial and industry/business park travel plans	Soft	69.2	64.0	67.2
	3	Corridor Smarter Choices Tools - clustering smarter travel interventions along a given corridor (covering residential, school, workplace, cycle promotion etc)	Soft/Infrastructure	62.2	54.5	49.2
	4	Sustainable Travel Town 'blanket' approach (or MSBC for sustainable travel package) as per DfT Sustainable Travel Town programmes	Soft/Infrastructure	68.5	70.7	68.2
	5	Area wide health promotion interventions e.g. based on key wards with diabetes, obesity, general poor health etc	Soft	67.5	67.3	69.0

DASTS STAGE 1 ASSESSMENT TABLE FOR TRAVEL PLAN MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
TRAVEL PLAN INTERVENTIONS		**MAJOR**				
	1	Business Stakeholder Engagement/Advice/Travel Plan 'Forums'/'Transport Management Associations' & Business Improvement Zones - all providing longer term management of travel plans - secured via planning process	Soft	62.5	60.3	63.5
	2	Planning-led travel plans including enforcement regime	Soft	63.8	66.0	65.0
	3	Workplaces/Hospitals/Universities/HE Sector travel plans	Soft	57.5	53.3	49.0
	4	Schools and Colleges Travel Plans	Soft	66.8	65.5	66.8
	5	Residential Travel Plans	Soft	65.6	64.6	64.6
	6	Retail/tourism/sports/concert attractors Travel Plans	Soft	49.0	51.3	47.0
	7	Rail Station Travel Plans	Soft	57.1	56.0	49.8
	8	Developing/promoting a car sharing scheme inc emergency lift home for car sharers	Soft	62.0	57.8	58.3
	9	Charging staff to park/forcing to use public car parking due to demand management and space limitation/regulation	Soft	46.8	45.0	49.6
		MINOR				
	10	Flexi-working e.g. staggered hours, alterations to roster timebands, full flexitime with limited core hours	Soft	45.9	47.2	49.7
	11	Home working e.g. approved homeworker policies, ability for employees to 'mix and match' with time at workbase	Soft	46.4	53.9	50.4
	12	Tele-working and conferencing	Soft	62.3	54.8	55.0
	13	Video-conferencing	Soft	50.2	50.7	45.4
	14	Introducing employer Hot-desk policy e.g. reduction of desk capacity and operational footprint and reduction in car parking spaces	Soft	48.5	51.3	51.8
	15	Providing a car club/pool car facility - including use of residential car clubs to provide pool cars during the day for business	Soft	47.6	60.1	48.3
	16	Minibus/Maxi Taxi and Taxi Budi Schemes e.g. use of people carriers and taxis for 2-14/15 employees to share costs	Soft	41.9	46.9	40.6
	17	Grants/loans to develop on-site facilities e.g. cycle parking, showers etc	Soft	47.6	54.9	58.3
	18	Employer low or no-cost ticket loan schemes e.g. Carnets, reduced commercial rates bus and rail	Infra	47.9	50.4	45.1
	19	Vanpooling for business operations e.g. shared vans across a smaller industrial estate or 'incubator' centre	Soft	40.8	45.3	40.8
	20	Progressive lease-car, business mileage allowance rates and AMAP limits	Soft	47.0	54.0	44.8

DASTS STAGE 1 ASSESSMENT TABLE FOR PROMOTION AND MARKETING MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
PROMOTION & MARKETING INTERVENTIONS		MAJOR				
	1	Promotional Events and Campaigns e.g. Bike to School Week, Walk to School Week, National Liftshare Day, branding etc	Soft	62.4	66.2	68.2
	2	Business carbon assessment	Soft	55.3	49.1	60.6
	3	Thematic campaign (e.g. focused on cycling) or local area based providing local 'welcome' information	Soft	59.9	63.9	62.9
	4	Area wide health promotion interventions including wellbeing, obesity and air quality issues	Soft	63.4	55.7	64.7
	5	Green Branding to match culture of town / Lifestyle marketing e.g. targeted at residents who value historic/conservation aspects of the town	Soft	43.5	51.3	57.8
		MINOR				
	6	Promotional information including timetables, maps literature, booklets, webpages, newsletters, noticeboards etc	Soft	48.7	54.7	61.2
	7	Personalised Travel Plans and Individualised Information for households or employees (support material)	Soft	65.3	70.8	59.8
	8	Personal Travel Carbon Calculator promotion of existing web-based resources to appeal to 'environmental ethical' target market which is growing	Soft	37.7	41.7	40.5
	9	Longer Term Marketing Strategy including communications plan	Soft	43.3	47.0	48.8

DASTS STAGE 1 ASSESSMENT TABLE FOR WALKING / DDA ACCESS MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
WALKING AND CYCLING INTERVENTIONS		**MAJOR**				
	1	Improving pedestrian routes and connections - e.g. lighting, DDA, crossing points etc	Infrastructure	59.5	58.3	61.8
	2	Walking buses for schools	Soft	58.4	57.9	58.7
	3	Green Infrastructure links/short cuts (covering Footpaths/Bridleways/PROW/RUPPs/permissive routes/desire lines/alleys investment)	Infrastructure	49.8	55.5	55.8
	4	Aggressive use of Manual for Streets user hierarchy to make streets more pedestrian friendly including play streets, school zones, quiet lanes, woonerven/home zones, shared space etc	Infrastructure	47.3	52.6	56.0
	5	Local traffic management/estate layouts that encourage active travel through directness and connectivity	Infrastructure	54.0	59.8	53.5
	6	Street design (surfaces, widths, pinch points, chicanes and vertical features) to discourage vehicles or slow them	Infrastructure	47.4	47.4	49.9
		MINOR				
	7	Pedestrian route map	Soft	53.4	49.8	62.7
	8	Walking support measures e.g. personal alarms/loan umbrellas, promotion of active travel, walking buddy schemes	Soft	47.2	45.7	51.7
	9	On site infrastructure improvements (showers/changing etc) inc DDA	Infrastructure	57.1	56.9	63.9
	10	Pedestrian signage renewal and replacement - including improved legibility code	Infrastructure	55.1	49.6	54.9

DASTS STAGE 1 ASSESSMENT TABLE FOR CYCLING ACCESS MEASURES

	Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
	MAJOR				
1	Cycle route network improvement - including lighting/crossings and routes provided/improved to appropriate Bikeability standards/Safer Routes	Infrastructure/ Technology	62.0	68.8	65.5
2	Cycle Demonstration Town approach providing town wide resource and pump priming of cycling - longer term potential - sustainable	Infrastructure/Soft	70.5	71.8	71.5
3	Innovative signage (e.g. cycle responsive 'Think Bike')	Technology	50.9	54.9	56.1
4	Cycle route map	Soft	66.8	66.8	68.8
	MINOR				
5	Staff discounts equipment and purchase for bikes e.g. supporting local independent traders - cycle2work etc	Soft	51.3	54.9	51.6
6	Promoting cycling as a healthy way to travel inc cycle buddy and other support measures	Soft	61.6	57.9	66.9
7	On-site infrastructure improvements including secure cycle parking	Infrastructure	51.9	56.1	52.6
8	Public cycle hire (on-street) e.g. for occasional local users and for tourists/visitors	Infrastructure	46.3	42.1	48.8
9	Cycle Trains for schools	Soft	41.6	33.1	47.9

DASTS STAGE 1 ASSESSMENT TABLE FOR PUBLIC TRANSPORT INNOVATION AND QUALITY - BUS MEASURES

	Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
	MAJOR				
1	Bus priority schemes including corridor and location measures (bus gates)	Infrastructure	64.4	48.2	48.2
2	Bus rail integration e.g.. physical interchange improvements, improved routing, better connections timings	Infrastructure	65.8	46.5	46.0
3	Improving accessibility to key locations by bus	Infrastructure/ Soft	63.3	59.8	51.0
4	Providing/ improving bus waiting facilities	Infrastructure	54.1	56.6	53.9
5	Bus stations - new/improved	Infrastructure	51.2	50.9	47.2
6	Real-time bus information	Soft/Technology	57.6	54.1	50.6
7	Better quality buses (tram style)	Technology/ Infrastructure	41.7	48.4	46.4
8	Rapid Transit (dedicated or shared space)	Infrastructure	42.2	35.4	34.4
9	Simplification of operations within the town e.g. managing impact of multioperator regimes and competition	Policy	36.8	37.8	47.0
10	Recast bus network- Introduce cross town bus services and higher frequencies	Policy/Soft/ Infrastructure	59.7	54.3	49.5
	MINOR				
11	Web and Phone Travel Info Services e.g. 'Traveline' and 'Transport Direct'	Soft/Technology	51.0	52.2	59.2
12	Public Transport Concessions/discounted fares	Soft	53.2	53.9	54.4
13	Inter-operator and Plus Bus ticket schemes (inc Smart Ticketing)	Soft	56.4	50.2	57.2
14	'Quality Route' schemes and QBP	Infrastructure/ Soft	56.0	42.5	33.8
15	Demand Responsive Services	Soft	48.5	34.0	34.5
16	Bus revenue support and fuel duty rebates	Soft	38.9	44.2	42.4
17	Community, 'dial-a-ride' and works- bus services	Soft	47.6	47.1	32.8

DASTS STAGE 1 ASSESSMENT TABLE FOR RAIL MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
RAIL INTERVENTIONS		MAJOR				
	1	Rail station upgrades and customer waiting improvement	Infrastructure	51.5	45.3	40.3
	2	New rail station to meet local demand and projected growth	Infrastructure	45.8	59.5	34.3
	3	Promotion of new/adjusted services	Soft	56.5	50.0	34.0
	4	Rail station travel plan	Soft	65.0	59.0	53.8
		MINOR				
	5	Providing rail discounts	Soft	56.6	59.1	40.3
	6	Improving rail passenger capacity in peak	Infrastructure/ Soft	48.0	42.7	33.0
	7	Inter-operator and 'OysterCard' schemes (Plus Bus)	Soft	57.6	56.8	40.1

DASTS STAGE 1 ASSESSMENT TABLE FOR PARK & RIDE MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
PARK AND RIDE INTERVENTIONS		MAJOR				
	1	Providing improved journey times from park and ride to town centre	Soft / Infrastructure / Technology	40.7	51.5	49.0
	2	Park and ride to central locations (i.e. town centre)	Infrastructure/ Soft	51.0	70.0	61.0
	3	Corridor infrastructure measures to give greater bus priority e.g. bus lanes, bus gates etc	Infrastructure	36.9	37.9	40.4
		MINOR				
	4	Park and ride to non-central locations (e.g. hospitals)	Infrastructure/ Soft	41.0	48.3	44.7
	5	Providing information and publicity	Soft	39.3	47.3	48.3
	6	Park and Cycle - e.g. ability to park and make onward cycle trip and/or cycle to the PandR and use secure cycle parking. Includes ability to leave own bike in secure storage overnight	Infrastructure/ Soft	45.5	45.5	43.2
	7	Park and Taxi e.g. to non-central locations	Infrastructure/ Soft	46.2	45.5	43.2
	8	Park and Share - e.g. parking and car share for longer distance journeys and/or to non-central locations	Infrastructure/ Soft	47.5	47.5	46.0

DASTS STAGE 1 ASSESSMENT TABLE FOR INTELLIGENT TRANSPORT SYSTEMS AND CAPACITY MANAGEMENT MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
INTELLIGENT TRANSPORT SYSTEMS INTERVENTIONS		MAJOR				
	1	Bus, cycle & HOV lanes	Infrastructure	64.4	48.4	56.4
	2	Area Traffic Control schemes e.g. enhanced UTMC, improved platooning, advantage given to buses and freight	Infrastructure/ Technology	62.3	61.8	62.8
	3	Real Time Passenger Information	Infrastructure/ Technology	61.0	46.0	59.8
	4	Area Traffic Management (zone based)	Infrastructure/ Technology	48.9	51.1	55.4
	5	Active Traffic Management (radial/corridor based)	Infrastructure/ Technology	47.7	48.7	47.9
	6	Car Parking - intelligent signing and waymarking to reduce unnecessary circulation in the town centre system and to encourage filtration off at P and R sites	Infrastructure/ Technology	50.6	57.8	54.1
	7	Traffic Reduction by time of day or congestion level (e.g. 'ramp access' and 'access control' techniques)	Infrastructure/ Technology	47.0	42.3	49.0
	8	Traffic Reduction by vehicle type, size, weight	Infrastructure/ Technology	47.5	48.7	53.5

DASTS STAGE 1 ASSESSMENT TABLE FOR PARKING STRATEGIES AND MANAGEMENT TOOL MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
PARKING INTERVENTIONS		MAJOR				
	1	Public Parking Control and Enforcement/Reduction in public parking provision	Infrastructure	46.5	49.7	47.5
	2	Improved Car Parking Signage and Advance VMS Systems (inc strategic road network)	Infrastructure/ Technology	55.6	55.1	53.3
	3	Workplace Parking Levy	Policy	32.6	54.9	46.4
	4	Parking priority/charges related to type, weight or emission standards of vehicle.	Policy	44.7	48.4	50.4
	5	De-criminalised Parking Enforcement.	Policy	46.1	53.4	43.4
	6	Parking bans in town centres/access entry control	Policy/ Infrastructure	41.7	40.9	39.7
	7	Wholesale or partial (e.g. 'Residents only') parking bans	Policy	43.9	46.8	41.7
	8	'Tow-away zones'	Policy	33.4	37.9	35.1
	9	'Red Routes' and 'ClearWays'	Policy/ Infrastructure	36.9	41.4	36.6
		MINOR				
	10	Reducing Workplace Parking Provision/Charging at Workplace/Permit Systems - including cash out options for employees to give up parking spaces	Policy/ Infrastructure	54.1	54.1	47.6
	11	Car Sharing Parking Zones at Workplace	Policy/ Infrastructure	53.9	53.9	47.4
	12	Review Essential / Occasional Car user allowances e.g. public sector employers leading by example	Soft/Policy	53.1	53.1	45.4
	13	Flexible parking (mobility spaces) e.g. using Blue Badge and Parent and Toddler parking as a shared resource with ability to 'toggle' between each category through disc displays	Infrastructure	43.6	43.6	41.4
	14	Quick (and safe) drop off / pick up parking spaces inc short stay spaces for employees at workplace	Infrastructure	44.9	44.9	46.1
	15	Car parking standards in Dev Control / PNRP restrictions	Policy	56.8	56.8	62.0
	16	Local on-street charging policy	Policy	45.9	45.9	40.1
	17	Local parking/waiting/loading restrictions	Policy	44.0	44.0	38.2
	18	HGV parking bans	Policy/ Infrastructure	38.8	38.8	36.3

DASTS STAGE 1 ASSESSMENT TABLE FOR FREIGHT MANAGEMENT MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
FREIGHT INTERVENTIONS		MAJOR				
	1	Lorry route or Area wide bans	Soft/Technology/ Infrastructure	46.6	49.1	55.1
	2	Low/zero-emission zones	Soft/Technology	48.2	49.8	49.2
	3	No-entry' or restricted entry areas (e.g. pedestrianisation)	Soft/Technology/ Infrastructure	49.2	49.9	54.4
	4	Consolidation Centres to support town centre deliveries	Soft/Technology/ Infrastructure	46.7	48.7	50.9
	5	Sustainable freight initiatives/logistics demonstration projects	Soft/Technology/ Infrastructure	46.7	48.1	55.3
		MINOR				
	6	Other tele-services including home delivery	Soft/Technology	62.8	57.1	61.1
	7	Fleet management advice to logistics companies/hauliers/SMEs	Soft/Technology	53.2	51.2	63.2
	8	Driver training (lower emissions and considerate driver programmes)	Soft	51.4	54.7	55.4
	9	Mobile shops and home delivery schemes, mail-order & web purchasing	Soft/Technology	50.8	50.1	56.1

DASTS STAGE 1 ASSESSMENT TABLE FOR WATER TRANSPORT MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
WATER TRANSPORT INTERVENTIONS		MINOR				
	1	Commuter 'sail and ride'	Infrastructure	27.9	34.6	29.9
	2	Leisure water use	Soft	25.1	34.6	34.3
	3	Water transit for freight/heavy goods movement	Infrastructure	30.5	32.5	28.8

DASTS STAGE 1 ASSESSMENT TABLE FOR HIGHWAYS INFRASTRUCTURE AND NETWORK CAPACITY ENHANCEMENT MEASURES

		Intervention	Type of measure	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
HIGHWAYS AND CAPACITY INTERVENTIONS		MAJOR				
	1	Dualling of capacity	Infrastructure	46.5	32.8	29.5
	2	New part/full ring road (inner)	Infrastructure	50.5	39.8	55.8
	3	New part/full ring road (outer)	Infrastructure	50.5	60.0	56.8
	4	Strategic junction remodelling/capacity improvements	Infrastructure/ Technology	48.1	41.1	46.8
	5	Strategic signalisation/ITS/UTMC system	Infrastructure/ Technology	54.1	53.6	58.1
	6	Traffic platooning tools for key radials	Infrastructure/ Technology	53.1	57.8	53.6
	7	Capacity enhancement along radials/tackling key pinchpoint	Infrastructure	48.6	38.3	44.1
	8	Strategic links to facilitate and access new development	Infrastructure	60.3	60.3	59.5
	9	Improved access to strategic road network (new junctions etc)	Infrastructure	62.8	59.3	55.0
	10	New road bridges	Infrastructure	45.5	36.7	39.7
	11	Strategic Pinchpoint/network bottleneck schemes		49.1	53.1	58.8
	12	New bus only and or Ped/cycle bridges	Infrastructure	61.8	57.5	53.5
		MINOR				
	13	Site specific junction improvements on local networks	Infrastructure	52.5	46.7	49.0
	14	Localised speed limits	Infrastructure	56.8	52.9	53.8
	15	Localised traffic management schemes	Infrastructure	55.5	51.5	52.5
	16	Banned rights turns etc to improve efficiency of key routes	Infrastructure	46.3	43.6	34.6
	17	Changes to junction timings/flow	Infrastructure/ Technology	48.3	48.1	48.1

DASTS STAGE 1 ASSESSMENT TABLE FOR MANAGEMENT, MONITORING AND MEASUREMENT

		Intervention / Method (MAJOR/MINOR categories do not apply)	Type of measure (for collection)	DASTS Stage 1 Score Telford	DASTS Stage 1 Score Shrewsbury	DASTS Stage 1 Score Hereford
MANAGEMENT AND MEASUREMENT INTERVENTIONS	1	Traffic link and junction flow	Technology/Soft	50.8	54.8	54.8
	2	Bus patronage	Soft	52.0	51.8	51.8
	3	Rail patronage	Soft	50.0	51.8	51.8
	4	Accident and Safety Data	Soft	50.8	49.6	50.8
	5	Walking flows	Technology/Soft	44.5	45.3	45.3
	6	Cycling flows	Technology/Soft	48.5	50.5	49.3
	7	Trip Diary Records	Soft	37.0	38.0	33.2
	8	Journey Time Reliability	Technology/Soft	49.7	49.5	48.5
	9	Journey Time	Technology/Soft	50.2	49.0	48.0
	10	Traffic speed	Technology/Soft	53.0	51.8	50.8
	11	Carbon reduction (inc other emissions)	Technology/Soft	47.3	45.1	45.1
	12	Travel Plan Surveys/Census - % response rate	Soft	48.6	50.4	50.4
	13	Liftshare data	Soft	49.2	49.0	49.0
	14	Stated preference surveys	Soft	49.2	51.5	47.0
	15	Personalised Travel Planning Results	Soft	49.2	52.5	52.5
	16	Land Use Planning Decisions	Soft	50.2	49.0	49.0
	17	Residential Travel Plan Incoming Resident surveys	Soft	53.2	54.0	55.0
	18	Park and Ride patronage	Soft	49.0	55.3	55.3
	19	Uptake of travel plan business advice	Soft	44.4	47.9	48.9
	20	Numbers of people cycle trained	Soft	50.4	52.9	51.7
	21	Numbers of people pedestrian trained	Soft	46.4	43.4	41.2
	22	Number of cycle parking spaces provided	Soft	47.8	53.3	52.1
	23	Quality Bus Partnership	Soft	53.4	51.2	45.2
	24	Freight Quality Partnership	Soft	44.9	38.9	40.2
	25	Area Wide Travel Plan Forums/Networks	Soft	51.7	53.5	53.5
	26	Using other National Indicator monitoring for non transport data (direct and indirect)	Soft	53.0	48.8	50.8

Appendix 7a: Smarter Choices Health Check Report: Telford

Appendix 7a: Smarter Choices Health Check Report: Telford

Evaluation of Key Data

Area	Households with at least 1 car	Households with no car	Cars Per Household
Telford	75.4%	23.4%	1.1
West Midlands Region	73.2%	26.8%	1.1
England and Wales	73.2%	26.8%	1.1

Table 1: Car Ownership / Access to Car in Telford

Telford has more households with at least 1 car than the regional and national figures and the same number of cars per household. With slightly more than three quarters of households having access to a car, car ownership and access in Telford can be judged to be very good.

Journey to Work

Table 2 below sets out the mode of transport used to travel to work by the resident population of Telford, as recorded in the 2001 census.

Town	Works from Home	Metro light rail or tram	Train	Bus minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorbike scooter or moped	Cycle	Foot	Other
Telford	7.3%	0.1%	1.0%	4.7%	0.9%	63.9%	10.0%	1.1%	2.5%	8.1%	0.4%
West Midlands	8.9%	0.2%	1.5%	8.8%	0.4%	60.0%	7.2%	0.9%	2.3%	9.5%	0.3%
England and Wales	9.2%	3.0%	4.1%	7.4%	0.5%	55.2%	6.3%	1.1%	2.8%	10.0%	0.5%

Table 2: Modal Split for Journeys to Work (Local, Regional & National)

Non-private car transport is used in 18% of journeys to work originating from Telford, which is slightly lower than 20.7% for the West Midlands and 21.9% for England and Wales.

Working from home lower than the regional and national figures, cycling and walking is used much less in Telford than in Hereford and Shrewsbury. The level of cycle based trips to work is very typical of the region and national percentages, while there are roughly 20% less foot-based journeys to work when compared to the rest of the country.

Health Indicators

Table 3 sets out the health indicators for Telford as recorded in the 2001 census.

Area	Wellness Score	Long Term Illness
Telford	81.5%	18.7%
West Midlands Region	82.0%	18.2%
England and Wales	81.2%	18.9%

Table 3: Percentage Healthy & With Long-Term Illnesses

Telford assesses itself to be in slightly worse health than the West Midlands region but in a better condition than all of England and Wales. There is a higher percentage of long term illness in Telford when compared to the West Midlands region, however a slightly smaller percentage of people have a long term illness when compared to the national statistics. **Figures 1** and **2** below illustrate the percentage of wellness and long term illnesses throughout Telford respectively.

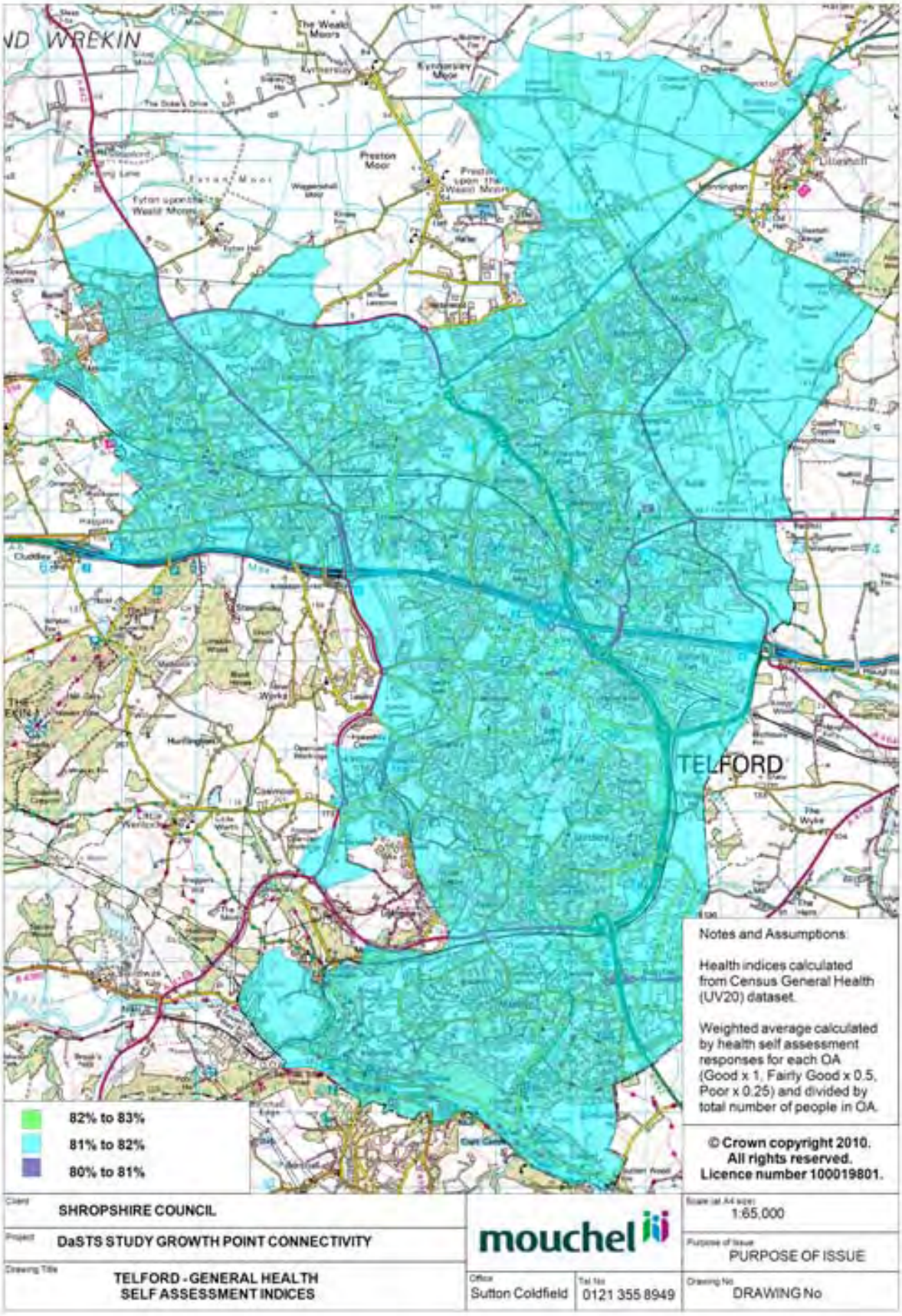

Figure 1: Health Self Assessment Percentage Map

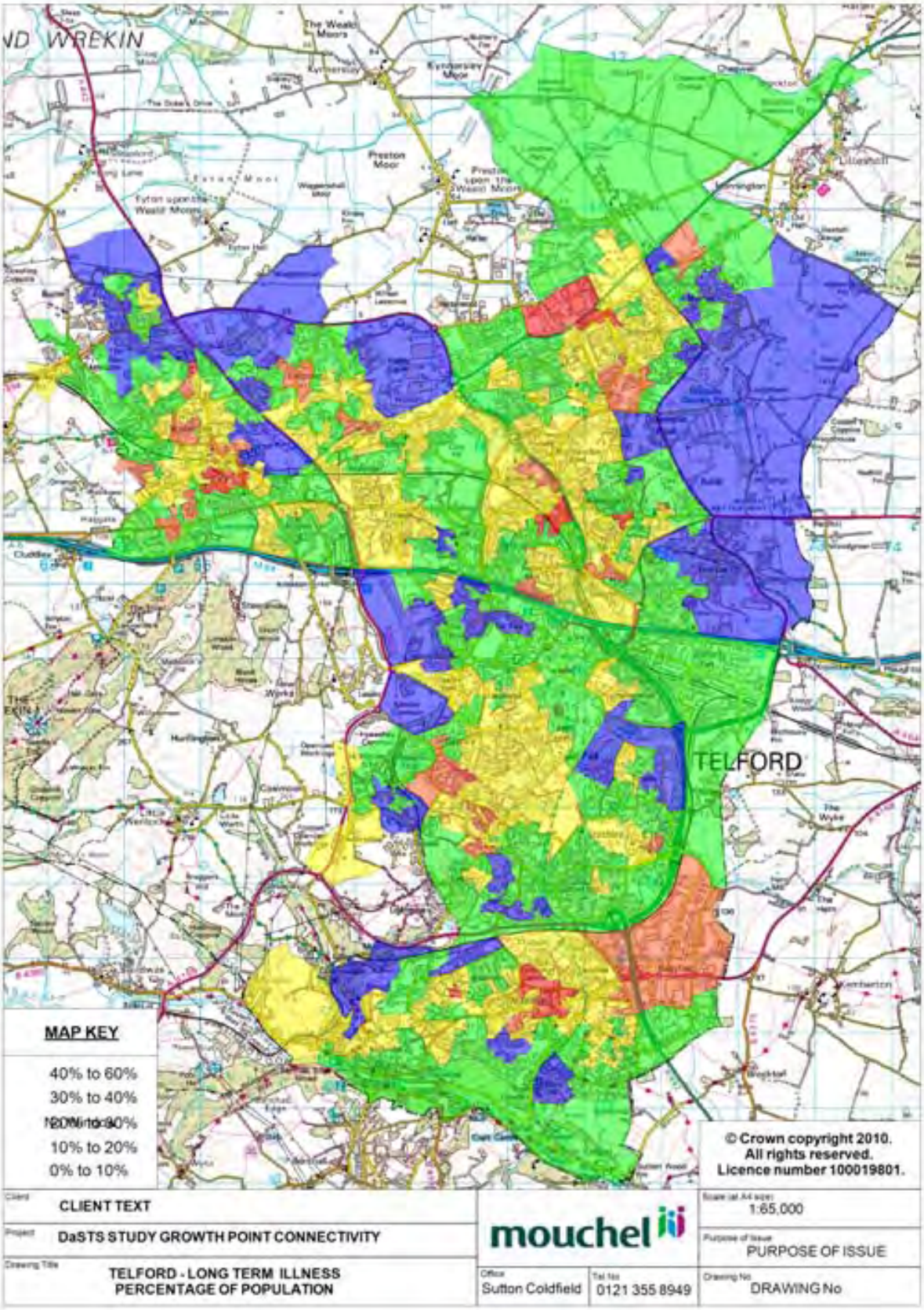

Figure 2: Long Term Illnesses Percentage Map

Travel Plan Intelligence

Primary School Travel Plans

Tables 4 and **5** below set out the School Travel Plans (STPs) that are currently in place for primary schools within the study area, together with their mode shift performance derived from PLASC returns and 'Hands Up' surveys carried out by the local authority in 2007 and 2009 respectively. This is supported by **Figure 3** below which locates these schools on a map.

Overall car use has stabilised at around a 50% mode share in 2007/09 reflecting the car-based layout and culture of the town, and the practice of out-commuting to nearby village school on the fringes of Telford. Data from school surveys prior to 2007, whilst not collected in the same way as the PLASC census, shows that since 2001 there has been continued car abstraction due to the success of the expanding school travel plan programme.

In the period 2007-2009 walking and cycling have stabilised. However, reflecting on the demographics and town layout structure for Telford (compared to Shrewsbury and Hereford), this represents a success for the local authority in 'freezing' and maintaining the modal split at 2007 levels. This can now be built upon particularly with the investment in training, active travel and the availability of intensive support for these programmes (see Qualitative Diagnosis below).

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Crudgington	85	70%	20	17%	7	6%	7	6%	2	2%	**121**
Donnington Wood	50	31%	3	2%	5	3%	103	64%	0	0%	**161**
High Ercall	51	40%	0	0%	53	42%	22	17%	0	0%	**126**
Wombridge	136	50%	5	2%	2	1%	130	48%	0	0%	**273**
Wrockwardine Wood	97	39%	13	5%	1	0%	140	56%	0	0%	**251**
Queenswood	46	33%	0	0%	0	0%	93	66%	2	1%	**141**
Priorlsee	218	68%	16	5%	0	0%	84	26%	2	1%	**320**
Apley Wood	226	57%	6	2%	2	1%	164	41%	1	0%	**399**
Teagues Bridge	70	37%	0	0%	3	2%	114	61%	0	0%	**187**
Redhill	180	54%	15	5%	2	1%	130	39%	6	2%	**333**
Wrekin View	140	44%	8	3%	2	1%	159	50%	9	3%	**318**
St Lawrence	61	77%	10	13%	0	0%	8	10%	0	0%	**79**
St George's	228	47%	7	1%	3	1%	247	51%	1	0%	**486**
St. Peter's	154	36%	8	2%	12	3%	229	53%	27	6%	**430**
St Patrick's	150	71%	9	4%	5	2%	45	21%	1	0%	**210**
St. atthews	107	34%	0	0%	1	0%	197	63%	8	3%	**313**
St Luke's	95	73%	6	5%	0	0%	29	22%	0	0%	**130**
Millbrook	59	17%	27	8%	3	1%	254	73%	5	1%	**348**
Meadows	170	53%	6	2%	0	0%	141	44%	3	1%	**320**
Short Wood	203	45%	15	3%	1	0%	228	51%	1	0%	**448**
Dothill	173	52%	6	2%	0	0%	146	44%	9	3%	**334**
Average		**49%**		**4%**		**3%**		**43%**		**1%**	

Table 4: 2007 Modal Split for Primary Schools in Study Area

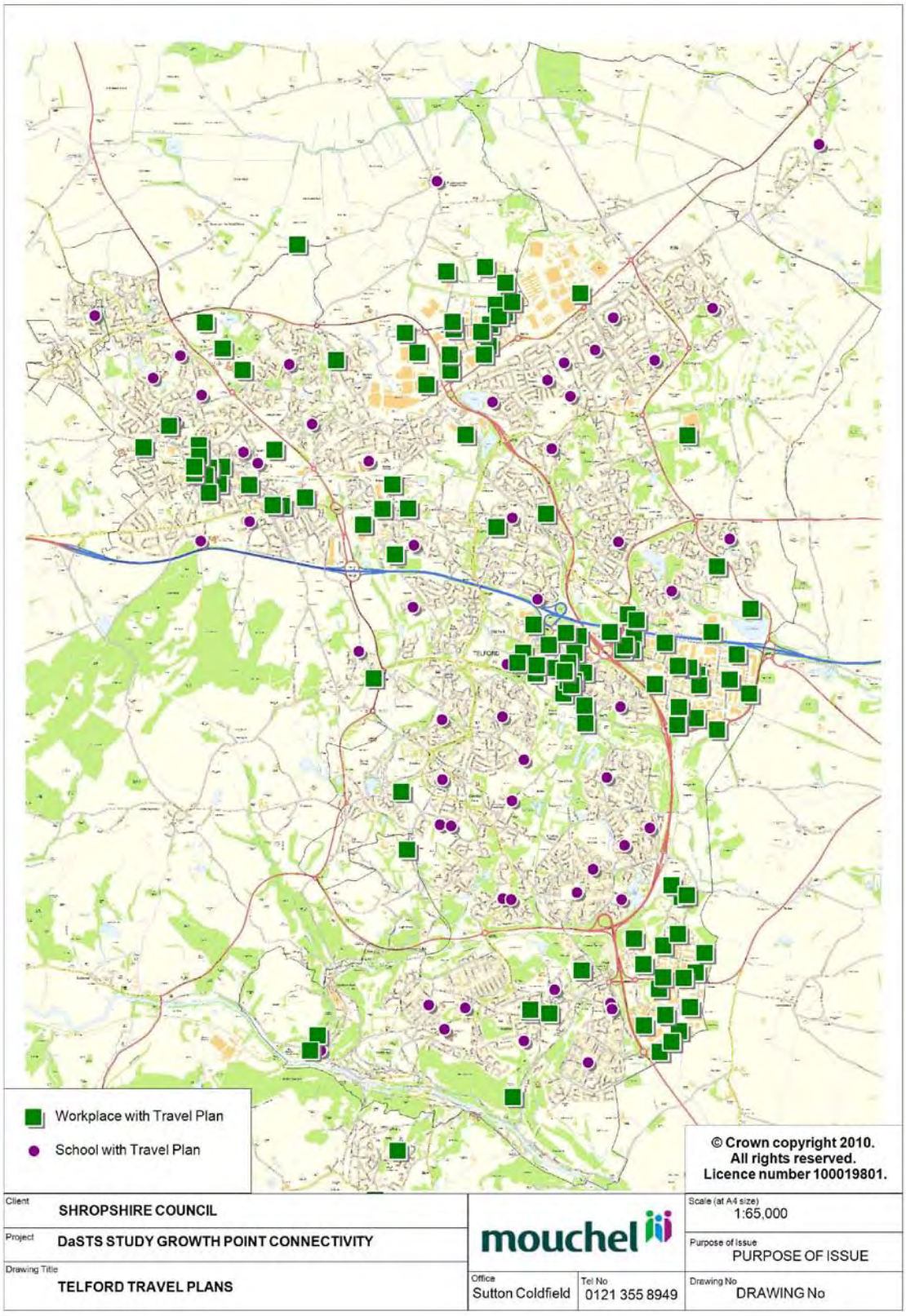

Figure 3: School & Workplace Travel Plan Locations in Telford

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Crudgington	72	71%	23	23%	6	6%	1	1%	0	0%	**102**
Donnington Wood	31	40%	0	0%	1	1%	44	56%	2	3%	**78**
High Ercall	40	35%	0	0%	48	42%	25	22%	0	0%	**113**
Wombridge	102	50%	1	0%	2	1%	100	49%	0	0%	**205**
Wrockwardine Wood	60	50%	3	3%	3	3%	53	44%	1	1%	**120**
Queenswood	31	33%	0	0%	0	0%	59	62%	4	4%	**95**
Priorlsee	186	66%	13	5%	0	0%	81	29%	0	0%	**281**
Apley Wood	193	55%	7	2%	0	0%	145	41%	8	2%	**353**
Teagues Bridge	79	46%	2	1%	2	1%	87	51%	0	0%	**170**
Redhill	166	52%	6	2%	0	0%	130	41%	15	5%	**318**
Wrekin View	136	52%	6	2%	2	1%	116	44%	4	2%	**264**
St Lawrence	53	75%	9	13%	0	0%	9	13%	0	0%	**71**
St George's	176	45%	7	2%	1	0%	203	52%	0	0%	**387**
St. eter's P	131	35%	7	2%	7	2%	218	58%	11	3%	**374**
St Patrick's	138	77%	4	2%	2	1%	35	19%	1	1%	**180**
St. atthews M	66	29%	2	1%	1	0%	147	65%	9	4%	**225**
St Luke's	74	65%	3	3%	3	3%	32	28%	1	1%	**113**
Millbrook	57	24%	7	3%	3	1%	169	71%	1	0%	**237**
Meadows	111	47%	16	7%	0	0%	110	46%	0	0%	**237**
Short Wood	161	44%	12	3%	0	0%	189	52%	2	1%	**364**
Dothill	225	53%	11	3%	0	0%	179	42%	7	2%	**422**
Average		**50%**		**4%**		**3%**		**42%**		**1%**	

Table 5: 2009 Modal Split for Primary Schools in Study Area

Secondary School Travel Plans

Tables 6 and **7** below set out the STPs that are currently in place for secondary schools within the study area, together with their mode shift performance derived from PLASC returns and 'Hands Up' surveys carried out by the local authority in 2007 and 2009 respectively. This is supported by **Figure 3** above which locates these schools on a map. The situation here is also established, with little change between 2007 and 2009. Across the 6 secondary schools around 32% now come by car, a slight increase over the 29% in 2007. Bus has stabilised at 15% mode share, as has walking and cycling (48%/3%).

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Wrockwardine Wood Arts College	301	31%	17	2%	65	7%	557	58%	17	2%	**957**
Sutherland Business and Enterprise College	143	24%	4	1%	86	14%	353	59%	11	2%	**597**
Hadley Learning Community - Secondary Phase	164	26%	34	5%	39	6%	360	57%	40	6%	**637**
Ercall Wood Technology College	395	49%	55	7%	79	10%	265	33%	20	2%	**814**
Charlton School	172	17%	54	5%	68	7%	691	67%	53	5%	**1038**
Blessed Robert Johnson Catholic College	189	26%	10	1%	353	49%	147	20%	19	3%	**718**
Average		**29%**		**4%**		**15%**		**49%**		**3%**	

Table 6: 2007 Modal Split for Secondary Schools in Study Area

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total

Wrockwardine Wood Arts College	339	37%	10	1%	66	7%	494	54%	13	1%	**922**
Sutherland Business and Enterprise College	124	25%	3	1%	30	6%	328	66%	15	3%	**500**
Hadley Learning Community - Secondary Phase	257	34%	3	0%	34	4%	433	57%	31	4%	**758**
Ercall Wood Technology College	421	52%	78	10%	62	8%	221	27%	23	3%	**805**
Charlton School	228	19%	27	2%	162	14%	713	61%	41	4%	**1171**
Blessed Robert Johnson Catholic College	160	25%	3	0%	313	48%	155	24%	14	2%	**648**
Average		**32%**		**2%**		**15%**		**48%**		**3%**	

Table 7: 2009 Modal Split for Secondary Schools in Study Area

Workplace

Table 8 below sets out the Workplace Travel Plans (WTP's) currently in place within the study area, together with any zonal Travel Plans set up. An indication of whether these have been secured through the planning process or are voluntary is also included. This is supported by **Figure 3** above which locates these WTP's on a map.

Business
Green Wood Centre, Ironbridge
Shrewsbury and Telford Hospital NHS, Princess Royal Hospital
Telford & Wrekin Council Re-write
TCAT
Enterprise HQ, Coalport
PCT - Primary Healthcare Trust
Alcoa Fastenings
Blists Hill (Ironbridge Gorge Museum trust =14 sites)
Lyreco
APT Solutions, Software & Support for Non-Profit Orgs
B&Q
Bakelite Polymers
Beth Johnson Housing
Inland Revenue
Land Registry
Lidl
Schneider Electric
Scott Wilson
Severn Hospice
W Corbett & Co (Galvanising)
Wright & McMillan Bennett
Tesco, Madeley
Wellington Methodist Church
Job Centre covering Town Centre, Madeley &Wellington
Telford Town Centre
Jacobs Babtie Engineering services.
Windsor Life
DocData
Cap Gemini
Bondabelt
Early World Nursery
Maka Machinery UK Ltd

NatWest UK
Earlyworld Nursery&PreSchool
The Salvation Army KIP project
Enta (International/Technologies)
Mahle Filter Systems.
Marks and Spencer
Towergate Risk Solutions (was Folgate Risk Solutions)
Telford Learning Point
Denso Manufacturing UK Ltd
Freyssinet - Sustainable Technology
Job Centre, Madeley
Job Centre, Wellington
HMRC
Johnson Controls
TTC, Telford Training Consultants, Hadley Pk
Wellington & District YMCA
Joint Learning Disability Service
The International Centre
Holiday Inn Telford
ABB Ltd
ABRO
Access Design & Engineering
Acoustaform Ltd
Adecco
Aga Rayburn
Alvis Vickers Ltd
Anystaff Recruitment Ltd
Asda Stores Ltd
AVF Group Ltd
Besblock Ltd
Best Western Valley Hotel
Bethphage Great Britain
Bishcof & Klein (UK) Ltd
Blockleys Brick Ltd
Brintons Ltd
Brook Street
BSL Ltd
BU Industrial Components Lts
Business Watch Guarding Ltd
Cedo Ltd
Celestica
Chequer Foods Ltd
Connexions
Contract Cleaning Services
Custom Packaging Ltd
D B Roberts & Partners
Daisy Chain Daycare
Denwells Ltd
Emile Tissot Foodservice
English Partnerships
Epson Telford Ltd

Eurofilms Extrusion Ltd
Faccenda Group
Folgate Group
Fruit of the Loom
Furrows Commercial Vehicles
Gibson Greetings Int. Ltd
GKN Autostructures
Greenhous Ltd
Gwynnes Solicitors
Gwynnes Solicitors - 2 sites?
Heinz Foodservice
Horton Automatics Ltd
Hutchinson (UK) Ltd
Ingimex Ltd
Invotec Circuits Tamworth Ltd
Joatrad Services Ltd
Joseph Ash Galvanizing Ltd
Kerridge Automative Systems
Leisure Link
Link 51 (Storage Products)
Magna Specialist Confectioners Ltd
Mail solutions
Management Suite
Martin-Kaye Solicitors
Maxell Europe Ltd
Maxell Mouldings Services
Mitac (UK) Ltd
MKS Telvac
NBC Group Ltd
New College
Ogihara Europe Ltd
PDSA
Pink Skips
Plastic Omnium Automotive Ltd
Precision Colour Printing Ltd
Proactive Personnel
Randstad Inhouse Services
Ricoh UK Products Ltd
Rowan Telmac Ltd
Ruskim Seafoods Ltd
Sainsburys Supermarkets Ltd
Saint-Gobain Pipelines
Severn Valley Packaging Ltd
Shropshire Business Womens Society
Shropshire Chamber of Commerce
Shropshire Fire & Rescue Service
Shropshire Newspapers Ltd
Shropshire Roadsweepers Ltd
Siemens VDO Automative Telford Ltd
Single Source Ltd
SMP Security Ltd

Spacecare Ltd
Synnex (UK) Ltd
T I Group Automative Systems Ltd
Tatung (UK) Ltd
Telford & Wrekin Partnership Development Unit
Telford Division Headquarters
Telford Park Inn Hotel
Telford Tourist Information
Telford Whitehouse Hotel
Tesa Technology UK Ltd
The Dodd Group (Midlands) Ltd
The International Hotel
The Protomold Company Ltd
Torton Bodies Ltd
Total People Ltd
TP Mouldings Ltd
Transicon Ltd
Trelleborg Industrial Profiles
Wastefile UK
Wellington Market & Property Co
Whittan Storage Systems
Wrekin Circuits Ltd
Wrekin Windows

Table 8: List of Workplaces in Study Area with a Travel Plan

Other

In terms of Residential Travel Plans (RTP's) and other specialist land uses, the local authority has been working with developers within the Lawley and Lightmoor developments.

Travel Plan Reviews

In order to assess the quality and robustness of Travel Plans in the Telford area, we carried out a review of all WTP's and sample STP's. This was to ascertain the range and relative quality of Travel Plans and particularly whether they have gone beyond the stage of being 'statements of intent' into living documents capable of achieving long term mode change. The challenges surrounding this issue are also covered in the qualitative section below.

Schools Sector

In terms of the quality of Travel Plans, 6 primary and 3 secondary schools were selected from the full schedule and appraised in more detail. This tackled robustness, quality, approach and longevity and whether the travel plan had gone beyond a statement of intent. Using a proforma approach the Travel Plans were assessed in an independent manner, assessing whether the DfT/DSCF requirement for every school to have an operational Travel Plan was resulting in real modal shift

(or retention). The school run is also a helpful indicator of the temperature of the town in terms of its cultural base. Summaries of our evaluations are included in Appendices 5p.

For Telford, performance is variable in terms of the range of mode shift (both positive and negative) but the Travel Plans themselves are generally well thought out with attention paid to the mix of measures that could be best suite to the school. Some schools have demonstrated a consistent trend away from SOC of up to 9% even in the last 2 years, again reflected by strong embedding of the Travel Plan. The diagnosis points to the risk of some Travel Plans becoming 'stagnant' because reviews are not taking place frequently enough and original target setting processes (5 yrs + ago) failing to cater for inventions to benefit bus/cycling and car sharing.

Workplace

Appendices 5p summarise the content and issues surrounding all WTP's that could be sourced within the study time period including the Council's own travel plan. As with the schools process, the diagnosis is designed to evaluate whether Travel Plans as a tool has passed beyond the 'statement of intent' stage, and whether there is any marked difference in compliance and monitoring between voluntary and planning-led Travel Plans.

Diagnosis

The workplace travel situation has suffered over the last 18 months due to the lack of resources to keep travel plan partnerships running, and the shift in priorities within businesses focusing on other issues. However this does not mean that the town is not ripe for re-energisation as far as workplace travel is concerned; it simply means that it must be carried out in a more holistic and wide area manner with an increased emphasis on partnership building and stronger, more explicit linkages to inward investment and economic development.

The Council's own drive to develop its own travel plan further (following a recent staff survey is early 2010) and to lead by example is critical to this process. Re-ignition of enthusiasm in this area, capitalising on a range of travel plans already in existence, needs to be addressed as a high priority to capture the goodwill already in place from business and to lever off the successful health programmes already in place.

Other

The proformas in Appendices 5p summarise the content and issues surrounding the Lightmoor and Lawley residential developments. These are both Travel Plans secured through the planning process, and demonstrate a mature and forward thinking approach to planning-led Travel Plans. Whilst there are still issues surrounding the Section 106 packages and their construction/adequacy (see Qualitative diagnosis below) the review of each of these Travel Plans demonstrates the importance of ensuring that sufficient funding is put in place for the sustainable

transport infrastructure needed to connect these sites by effective public transport, walking and cycling networks.

SMoTS Strategy

The SMoTS strategy for Telford and Wrekin Council was last updated in 2009 and updates the Active School Strategy previously developed in 2005/6. The Action Plan covers the period to 2011 and covers a wide range of measures from STPs (seen as the foundation) through to walking infrastructure, walking buses and independent travel training.

The SMoTS strategy focuses on a balanced menu of interventions but particularly has to accommodate a high level of change in terms of site rationalisation / consolidation and investments through the BSF programme.

Whilst schools are located in as fairly even spread across Telford, the accessibility diagnosis clearly shows that those in outer suburban areas and other fringe enjoy less accessibility, primarily due to the way the primary road network functions through the town.

Diagnosis

The SMoTs strategy demonstrates that the Council are having a high degree of success with school engagement, and that bespoke, localised solutions with high BCRs are being introduced at a number of schools (e.g. CCTV, shelters, park and walk, wig-wags etc). The strategy to date has been very rounded, providing a wide choice on interventions which are then refined down to meet the site specific challenges of individual schools. However the advent of the BSF programme coupled with the strong emphasis on promotion, training and school travel planning, means that the level of staff resources needed to maintain an effective service should be maintained if 'school run' interventions are going to form a key part of the forward DaSTS strategy.

As most interventions in the SMoTS strategy are being implemented in parallel, attention to resourcing is an important consideration, and is reinforced in the Qualitative diagnosis below.

Publications and Promotional Material

The list below contains all the key promotional and information materials used by the local authority, whether produced directly or brokered to the public/target audiences. The qualitative section below reflects on the order of priority of these tools, and which publications are seen as essential for ongoing, effective communication of smarter choices messages.

- Walking & Cycling Map of Telford & Wrekin
- journeyshare - cut the cost of travel to work
- Telford & Wrekin Bus Map & Frequencies

- Arriva Redline (route 44) timetable
- Arriva Ruraline (route 481) timetable
- Arriva Blueline (route 33) timetable
- Arriva Amberline (route 11) timetable
- Free Adult Cycle Training Leaflet
- Walking & Cycling Route Map (Walk the Gorge)
- Walking Route Map (Hutchison Way)
- Walking & Cycling Route Map (Perry Way)
- Walking Route Map (Reynolds Way)
- Walking & Cycling Route Map (Silkin Way)
- Wheels to Work (AWM) - provision or training

Diagnosis

Telford Council has a limited range of publicity and promotion although the schools/active travel sector is strong. There is an emphasis on e-information and developing the Council website to achieve this.

Qualitative Diagnosis

This section is based on an interview carried out on 1st February 2010 with the Sustainable Transport Team at Telford and Wrekin Council.

School Travel/ SMoTs

The Council's SMoTS strategy has been in place for 2 years, setting out the Council's action plan for school travel plan development and diagnosing the current trends and issues affecting Telford and the surrounding area.

Telford has 100% coverage in terms of schools with Travel Plans to DCSF standards; also a couple of independent schools have also moved forward with their own Travel Plan. Notably the relocation of Old Hall Prep School near to Wrekin College has resulted in a positive mode shift as the independent school movements have been consolidated. The Thomas Telford City Technology College is a central government funded/run school (no LEA control) which was built strategically to provide education for Telford and Wolverhampton areas. 50% of the pupils are from Wolverhampton and circa 10 coaches are used per day to bring in the students. The College is one of the top 10 UIK secondary schools and admission is by entry examination/assessment but Telford pupils can apply.

It should be noted that the Council have not carried out a dedicated SMoTS audit programme, as the Travel Plan process and safer routes work is automatically picking up these issues.

New School Programme

It should be noted that many of the schools have now been rebuilt and/or merged, with PFI and Academy status triggering investment in new build (e.g. Hadley Learning Community). The BSF programme for secondary schools is also in place in Telford. This has also affected the distribution of trips and positively worked where infant and junior, or feeder primary and secondary schools are co-located in close proximity.

Telford's Highways Development Control team have also been supportive in assessing parking levels as part of school consolidation and relocation problems and controlling down the parking stock on site through the planning process.

School Travel Census and 'School Run' Behaviour

The school travel census has been carried out in Telford following the PLASC method since academic year 06/07 and the latest audit returns are now due in from the school surveys conducted in Jan 2010.

In terms of mode shift the Telford schools have remained static, but this should be considered a 'success' in the light of the relative car base and culture on which Telford New town was historically built.

Apart from older parts of the area, where catchments have the chance to remain fairly local, the evolution of Telford around its road network, combined with a number of key 'attractor schools' means that the temptation for car to be used is comparatively stronger than in Shrewsbury or Hereford. The design and layout of residential areas also means that walking and cycling can be seen as the less attractive option, and poor permeability between residential areas and lack of easy penetration of bus services into housing areas also deters use of active travel modes.

A key challenge for the Council is that journey to school metrics are often compared with other conurbations and heavily urban Metropolitan authorities like Wolverhampton or Sandwell. Telford is considered neither to be a 'Shrewsbury', nor a 'Wolverhampton' but a hybrid environment that has historically grown around the car, and in layout terms is more disparate and built on a strong radial road structure with a tight urban boundary as in the historic towns.

Therefore, the statistics that suggest Telford is the worst performing Council are in the West Midlands may be misleading as 'freezing' of car use in the face of a car culture can be considered a success. Also, in terms of employment opportunity Telford is atypical of the other growth towns, given the higher proportions of manufacturing, production and distribution activities (vs. service and office sectors) which reduce working hour flexibility. Variations in school opening hours were considered and Lordshill Secondary does operate continental opening times of 0815-1430 but this is uncommon in the town.

Use of car for the school run is also symptomatic of the juxtaposition of employment and housing, and that the 3 main employment zones (apart from the town centre) are in off-centre, suburban or edge of town locations. For example, Brookside and Woodside school catchments are in relatively closed residential areas and have 80% walking mode share, but school is Redhill and Lawley, feeding from typical 1980s/90s housing estates, produce much higher car use. Lawley also has the benefit of an outstanding OFSTED review, which brings its own 'magnet' issues, whereas in Newdale the catchment areas cross over into surrounding neighbourhoods.

There is also a 'pull' to rural schools in the surrounding area where there are employ places, better pupil-teacher ratios and a 'quality of life' factor that encourages parents to out-commute their children to rural village schools. The average primary school roll in urban Telford is between 300-400 pupils whereas in some of the village 'satellites', numbers are as low as 75 (Church Aston, St Lawrence). In-commuting to Telford 'fringe' schools has also occurred as a by-product of Shropshire's closures programme.

School Travel Plans

All the STPs are to DCSF standard but the central government grant for school facilities was a key driver for this. On occasion there have been blockages to certain initiatives (e.g. cycling) but this has been personality driven in isolated cases. As these personalities have 'moved on' the opportunities to encourage engagement have now been re-taken in these schools.

All schools have cycle training for the primary age group, but a couple of schools will not allow children to cycle to school until they have undergone the training.

Bike parking is a key area where funding is needed and grants of up to 80% of the capital cost have been awarded. This has been achieved through a grant from Cycling England to the Council. However there are isolated cases where the cycle provision is generous but the momentum is required to keep the mode shift high (e.g. Dot Hill Primary).

There is a healthy level of interagency working to support Travel Plan development and walking and cycling programmes. Collaboration with the School Sports Partnership is seen as an important alliance, and the Health Schools programme at present is helping maintain commitment and support for STPs, working closely with PCT.

Telford Council has recently bought into the STAR school Travel Plan accreditation system which will help move quality forward. There are currently 57 schools in the Telford study area but given this level intensive support to any one site is not achievable. STPs are updated on rolling 3 year basis.

As with other local authorities, Telford has suffered from ‘parent perception’ issues, and legacy issues arising from pedestrian/cyclist accidents in the past have deterred a limited number of schools from advocating active travel modes.

There is also a pattern emerging amongst ethnic minorities (e.g. Wellington) where the culture has been particularly strong to drive children to school.

Development of school centric walk and cycle maps is under way, with Madeley Academy as the pilot. All schools are sent a half-termly newsletter updating them on school Travel Planning and other initiatives.

Workplace and Business Travel Planning

Telford has historically been strong on the development of WTPs since it was formed as a unitary authority in 1998. However, the level of engagement and support from the business sector has tended to reflect on the level of enthusiasm and motivation by individual Council officers rather than the embedded, sustained services.

Up to 2006 a legacy of Area Wide Travel Plans, hospital Travel Plans and travel forums had been developed, but commitment had fallen away. Partly driven by lack of resources (both in-company and within the Council) and partly due to the mainly voluntary nature of these plans, the reduction in activity and; ‘momentum’ has shown how quickly the Travel Plan tool can lose it power within an essentially car-based town.

Changeover in council personnel also means that business relations were hard to maintain, and if the ‘mantle’ of the individual was not as ‘ambassadorial’ as their predecessors, then this was another weakening factor. As a result no 'chase-up' monitoring was arrived out to identify whether voluntary (or planning led) Travel Plans were successful there is little year-by-year evidence of which measures are the most successful.

However, the current situation is that, as long as resources can be safeguarded for the travel planning longer-term, the Council can move forward with a much stronger travel plan strategy. There is a concern that if intensive action is carried out over the next year-18 months to enlist businesses afresh and to reignite enthusiasm, that there must be a vehicle in place and resources to keep this going. The Council intend to provide a benchmarked Smarter Choices Delivery Strategy, based on clears targets and outcomes, coupled to a manned service approach rather than ‘ad hoc opportunity’ advice. The can pivot off some of the work currently being undertaken in the out of town industrial areas.

Pivotal to this is the council’s need to lead by example, and to provide a ‘gold’ standard Travel Plan to support other business. This is another pre-requisite that needs to be in place before more aggressive marketing of WTP solutions can be entertained.

Council Travel Plan

The Council Travel Plan is currently ongoing an overhaul, using the latest survey intelligence collected in early 2010. Already the Council has achieved a salary sacrifice scheme for bike purchase, pool car provision and free bike loans to 'test out' cycling.

The top priority for the sustainable transport team in this area is to resolve the ongoing commitment to the Corporate Travel plans, and to ensure that the revised Plan is corporately recognised and embedded.

Car Sharing

At present the Council operates a journeyshare service for Telford, run by Jambusters. After recent cleansing of the data the membership tests at 1500 active members out of a population of 160,000. The scheme has been running for 6 years.

Whilst it has been promoted via Travel Planning advice and town centre employers' forums, then service has not been aggressively promoted. The prognosis is that with resources and target market segmentation then the membership could potentially double and certainly forms one of the key planks of smarter travel work going forward.

Public Transport

Given its relatively low car ownership, bus travel is considered as the public transport backbone of the town. Whilst bus patronage was declining prior to 1998, during the LTP1 period this saw a significant increase in bus use (up 20%) due to the redesign of routes to call at the town centre on a hub and spoke basis. During LTP2 there has been a slight decrease but this is partly due to the lack of permeability from residential areas to the bus service loops that pass outside the housing areas. Issues of personal safety and security, and waiting for buses in areas without natural surveillance are seen as a deterrent on some routes. Punctuality, age of buses and quality of service are also seen as contributory factors.

Despite relatively good service frequencies (10-12-15 minute headway levels) the off centre location of employment zones (particularly those employing set-shift blue collar workers) means that bus in not convenient or direct.

There is also a discernable north-south split across the town showing marked differences in use of private car versus bus use.

Cycling

The off road nature of the network has acted as a deterrent to use, and the lack of direct connectivity between residential areas and key shops and services. The M54 corridor causes particular severance issues and the mix of cyclists with general traffic on busy feeder routes to motorway junctions is also a negative factor.

Adult Cycle training is now being concentred on 3 industrial areas – Hortonwood, Stafford Park and Halesfield.

Halesfield will see £100k of capital investment in infrastructure this FY, coupled with a travel grant to encourager business cycle parking. This would allow £2 - £5k of match funding to enable improved facilities to be provided, supported by the Adult Cycle Training programme.

At present there is a relatively low level of promotion and locational the sites are not easy to cycle to. The programme ends in April 2011 but the Council will focus in FY 10/11 on more aggressive promotion of the ACT package. As part of this a cycle buddy project will also be set up.

Overall the cycle promotion and training programme has attracted a budget of £80k over the 3 sites.

Forward Growth in Workplace Travel Planning

Cap Gemini and other similar 'cornerstone' businesses will be key targets going forward. Existing major employers such as RICOH already use buses to bring in their labour from the West Midlands as it is more cost-effective than sourcing local labour where the skill sets are different.

Internal company policies are not necessarily conducive to the attraction of local labour to jobs in the town and therefore Telford generates more 'travel' as the match of jobs to skills does not support local containment. Unless there are more flexible approaches to skills and labour, Telford will always be fighting against reliance on a wider geographic base to draw in its labour force.

The existing linkages with Economic Development officers (via Transform in Telford quasi urban regeneration organisation) will need to be further strengthen to cross sell the benefits of Travel Plans and other sustainable travel packages. Currently there is likely to be resistance to homeworking and 'intelligent' working practices due to the manufacturing and logistics profile of the labour market and the on-costs for equipping staff to operate in this way.

Promotion and Marketing

The Council produce a series of leaflets and promotional material. Of particular use are the Public transport and the Walking and Cycling Map. The Council's public website does carry travel information but could be enhanced to give more detailed information.

Residential Travel Planning

Telford has been practicality strong in this area with 3 major housing sites (Lightmoor, East Ketley and Lawley) all requiring the development of residential Travel Plans, although they are differing stages in the planning process.

Within Lightmoor a detailed travel plan has been approved, with a £300,000 contribution secured to bus services to support an 800 unit scheme. However, given the scale of the residential growth there are concerns that the level of Section 106 contributions secured to pump prime the introduction of a commercially available bus service are insufficient Whilst the Section 106 secures the public transport contribution, the requirements of the travel plan are not embedded and the Council have required the travel plan by condition. Similarly Lawley's public transport contribution stands at £800,000 for 3,500 units and a similar ratio has also been applied for East Ketley.

The Council is open to the advancement of Section 106 mechanism to support travel plans and a wider range of measures, securing resources on a more flexible manner and basing performance on outcomes.

Whilst these 3 sites have already gone some way through the planning process (Lawley is approaching the trigger of 260 units for provision of the bus service) there may still be opportunity to follow the latest DfT guidance on Travel Planning and the planning process, and embed best practice in terms of linking travel plans to Section 106 agreements.

Planning Process

At present there is no specific SPD document to support smarter choices and secure Section 106 contributions in a more meaningful way in the light of DfT's latest guidance on Travel Plans.

Whilst Travel Plan documents have been successfully secured through the planning process, they are not linked to implementation and performance obligations. A key challenge under the existing Section 106 regime is that monies are secured for specific solutions that pre-empt what the 'correct' solution might be for the incoming residents.

Therefore, a mechanism is needed to ensure that the developer is obligated to work with the Council to trigger the 'right' solution mix. Strategic mapping of all forward development sites and sequencing their release to maximise use of sustainable travel is the approach the council would like to take in the near future.

Staffing & Resources

Given the challenges in securing long term employer commitment, and the success in running pilot and temporary funded projects across school and workplace sectors, staffing and resourcing levels for sustained travel need to be fixed for a 5+ year term

in order to give longevity and to ensure relationships are maintained with stakeholders

Part of the reason for not advancing with an aggressive smarter travel programme is because of uncertainty about future resources.

To give an ideal of scale, the current resources include:

- Sustainable Transport officer focusing on a range on initiatives including travel plans secured via the planning process, car sharing, marketing and promotion etc

- Road safety ETP role and client safety scheme functions (2 posts). This covers all the ETP primary school services and client role for delivering local safety schemes for primary schools

- Road safety ETP role covering secondary school and college road safety programmes (1 post)

- 2 year PCT funded posts to support with Year 4 pedestrian training and walking buses (1 post) and active travel programmes for transition year to secondary school (1 post)

- 1 vacancy for a workplace travel planner – vacant since March 2009

There is also a pool of around 30 approved trainers able to support on cycle/ pedestrian training in a flexible manner.

It is important to note that of the 6 current staff working on the schools and active travel agenda, 4 are supported by external funding on a temporary/contract basis through PCT/DSCF and similar funding sources. This highlights the importance of sustainable staff resourcing to manage and develop programmes that rely on a high level of human intervention and relationship building. For smarter travel to be fully embedded and continue mode shift to be delivered through the school and active travel agendas will require longer term resourcing well into the DaSTS study period.

If the current level of staffing falls below its current level' that apart from statutory road safety duties, school travel plan signposting and base level monitoring will be only core activities that can continue. Development of the workplace Travel Planner role and how this fits with the revised Council Travel Plan, refreshed workplace Travel Planning, and planning-led travel plans is a priority for consideration over the next 3 months.

Appendix 7b: Smarter Choices Health Check Report: Shrewsbury

Appendix 7b: Smarter Choices Health Check Report: Shrewsbury

Evaluation of Key Data

Car Ownership/Access to Car

Table 1 sets out the car ownership and access statistics for Shrewsbury, as recorded in the 2001 census.

Area	Households with at least 1 car	Households with no car	Cars Per Household
Shrewsbury	76.8%	22.2%	1.1
West Midlands Region	73.2%	26.8%	1.1
England and Wales	73.2%	26.8%	1.1

Table 1: Car Ownership/Access to Car in Shrewsbury

Shrewsbury has more households with at least 1 car than the regional and national figures and the same number of cars per household. It also has the most percentage of households with at least 1 car of the three towns. With more than three quarters of all households in Shrewsbury having access to a car, car ownership and access in Shrewsbury can be deemed to be very good.

Journey to Work

Table 2 sets out the mode of transport used to travel to work by the resident population of Shrewsbury, as recorded in the 2001 census.

Town	Works from Home	Metro light rail or tram	Train	Bus or coach	Taxi or minicab	Car or van	Pax in car or van	Motorbike scooter or moped	Cycle	Walk	Other
Shrewsbury	8.6%	0.0%	1.0%	5.1%	0.4%	57.0%	7.1%	1.1%	6.0%	13.2%	0.4%
West Midlands Region	8.9%	0.2%	1.5%	8.8%	0.4%	60.0%	7.2%	0.9%	2.3%	9.5%	0.3%
England and Wales	9.2%	3.0%	4.1%	7.4%	0.5%	55.2%	6.3%	1.1%	2.8%	10.0%	0.5%

Table 2: Modal Split for Journeys to Work (Local, Regional & National)

Sustainable transport is used in 28% of journeys to work, originating from Shrewsbury, which is slightly higher than 21% for the West Midlands and 21% for England and Wales. Whilst working from home is slightly lower than the regional and national figures, cycling and walking is more prevalent in Shrewsbury than in the rest of the country, with more than double the national average percentage of cycle journeys, and approximately a third more foot-based journeys to work.

Health Indicators

Table 3 sets out the health indicators for Shrewsbury, as recorded in the 2001 census.

Area	Wellness Score	Long Term Illness
Shrewsbury	82.7%	18.2%
West Midlands Region	82.0%	18.2%
England and Wales	81.2%	18.9%

Table 3: Percentage Healthy & With Long-Term Illnesses

Shrewsbury assesses itself to be in better health than the West Midlands region and England and Wales as a whole. It has the same percentage of long term sick as the West Midlands and slightly less than England and Wales. Due to higher wellness scores and lower percentage of long term illnesses, Shrewsbury could be deemed to have the best status of health of the three towns. **Figures 1** and **2** below illustrate the percentage of wellness and long term illnesses throughout Shrewsbury respectively.

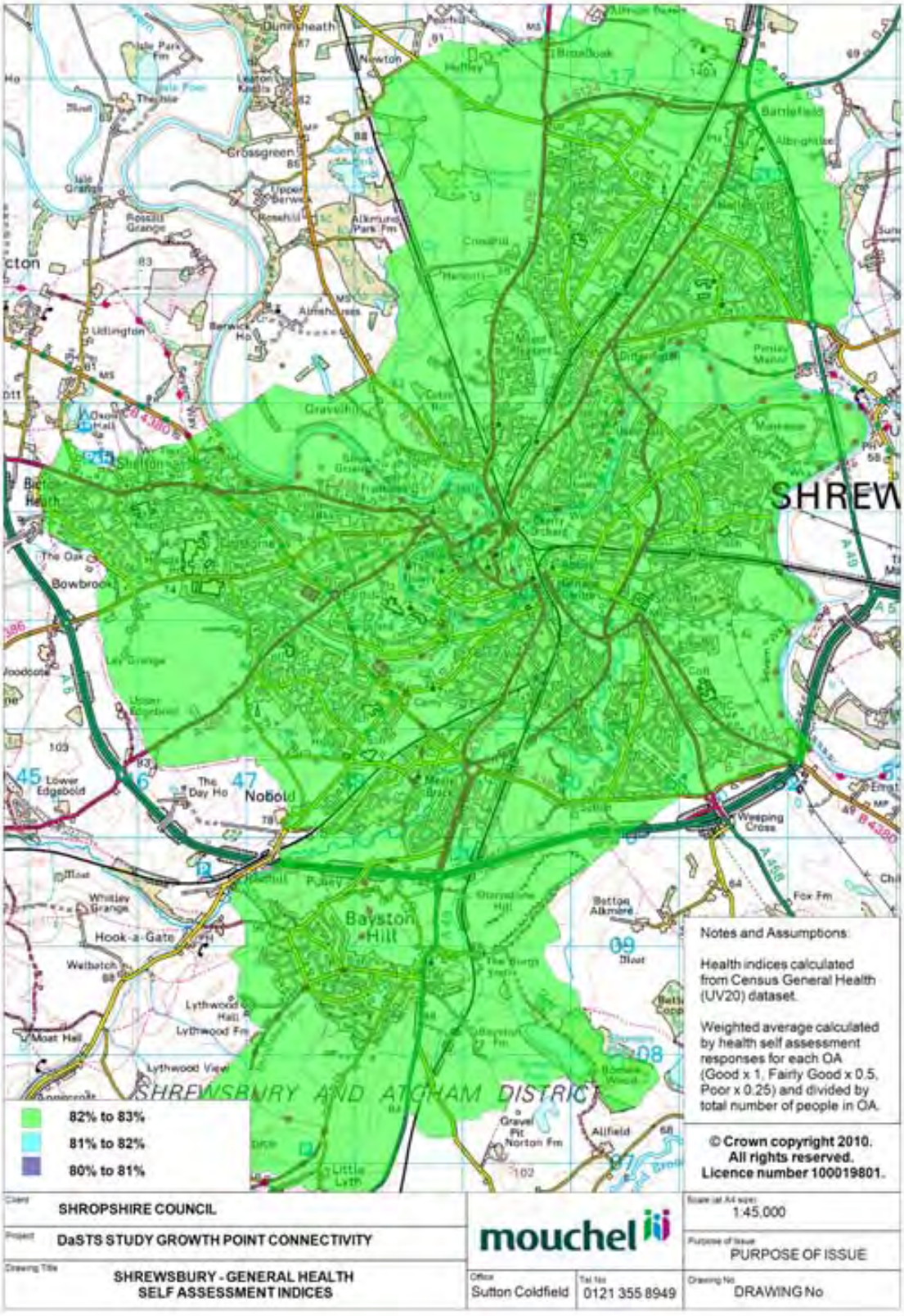

Figure 1: Health Self Assessment Percentage Map for Shrewsbury

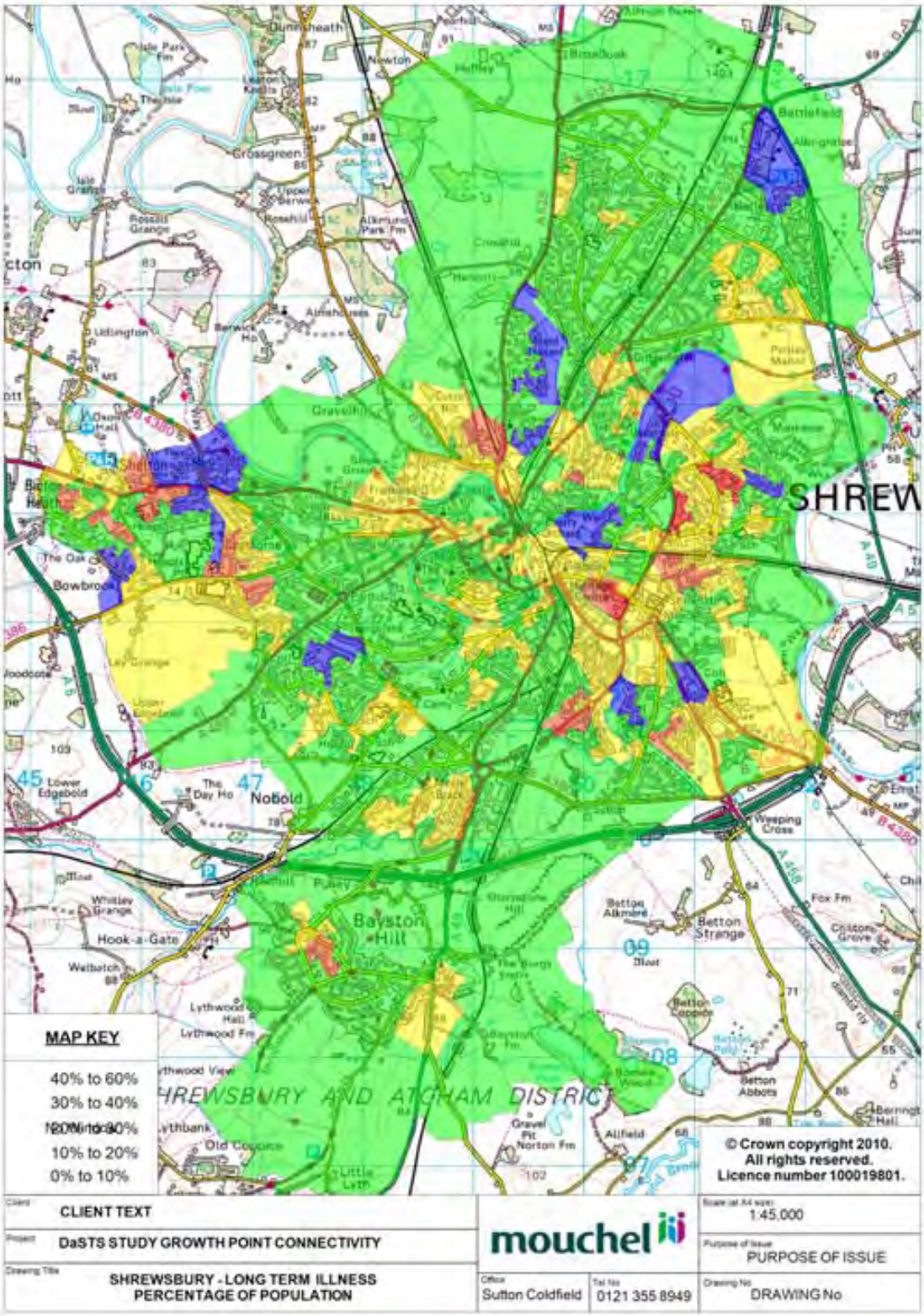

Figure 2: Long Term Illnesses Percentage Map for Shrewsbury

Travel Plan Intelligence

Primary School Travel Plans

Tables 4, 5 and **6** below set out the STPs that are currently in place for primary schools within the Shrewsbury study area, together with their mode shift performance derived from PLASC returns and 'Hands Up' surveys carried out by the local authority in 2001, 2007 and 2009 respectively. This is supported by **Figure 3** below which locates these schools on a map.

Overall car use has stabilised at around a 33% mode share in 2007/09 reflecting the relatively compact nature and the presence of pockets of housing where the journey to school is very localised. Data from school surveys prior to 2007, whilst not collected in the same way as the PLASC census, shows that school travel plans have been successful in curbing car use overall. In the period 2007-2009 walking and cycling have also stabilised with a slight increase in walking mode share from 52% to 54%. Cycle use has stayed constant at 3% but given the Cycle Town programme and the installation of secure cycle parking and other cycling infrastructure schemes, this is expected to rise in subsequent PLASC surveys.

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Belvidere	0	0%	0	0%	0	0%	0	0%	0	0%	**0**
Bicton	52	74%	1	1%	0	0%	17	24%	0	0%	**70**
Coleham	0	0%	0	0%	0	0%	0	0%	0	0%	**0**
Crowmoor	37	14%	32	12%	2	1%	176	68%	10	4%	**257**
Grange	37	18%	22	11%	0	0%	141	70%	1	0%	**201**
Greenacres	31	14%	10	5%	8	4%	168	76%	3	1%	**220**
Greenfields	47	17%	45	16%	25	9%	147	52%	19	7%	**283**
Harlescott	67	17%	12	3%	1	0%	294	76%	11	3%	**385**
Holy Cross	78	27%	36	13%	0	0%	164	58%	6	2%	**284**
Longden	22	25%	11	13%	40	46%	12	14%	2	2%	**87**
Longmeadow	106	35%	11	4%	13	4%	177	58%	0	0%	**307**
Martin Wilson	34	20%	3	2%	3	2%	123	73%	6	4%	**169**
Meole Brace	0	0%	0	0%	0	0%	0	0%	0	0%	**0**
Mount Pleasant	22	14%	12	8%	0	0%	120	78%	0	0%	**154**
Oakland	19	17%	12	11%	0	0%	81	72%	0	0%	**112**
Oxen	48	14%	20	6%	2	1%	262	79%	0	0%	**332**
Radbrook	56	25%	53	24%	0	0%	111	50%	1	0%	**221**
Severndale	0	0%	0	0%	193	100%	0	0%	0	0%	**193**
St. George's County	98	30%	72	22%	2	1%	139	43%	15	5%	**326**
St. Giles	55	21%	66	25%	3	1%	119	46%	17	7%	**260**
St. ucia's	25	20%	15	12%	69	54%	19	15%	0	0%	**128**
St. Mary's Catholic	0	0%	0	0%	0	0%	0	0%	0	0%	**0**
St.Thomas & St.Anne's	55	70%	9	11%	3	4%	10	13%	2	3%	**79**
Trinity	23	18%	6	5%	54	42%	46	35%	1	1%	**130**
Wilfred Owen	22	10%	13	6%	2	1%	171	80%	5	2%	**213**
Average		**20%**		**8%**		**11%**		**43%**		**2%**	

Table 4: 2001 Modal Split for Primary Schools in Shrewsbury Study Area

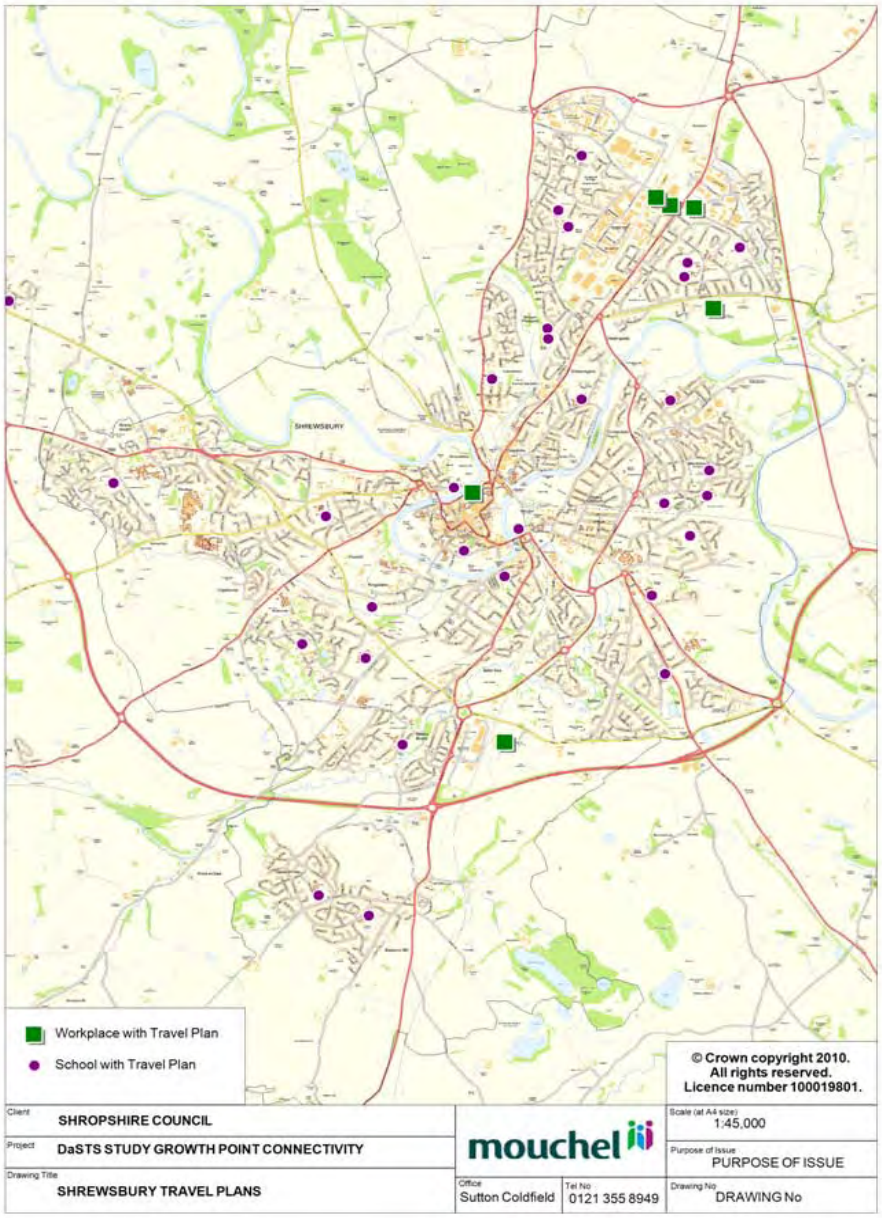

Figure 3: Travel Plan Locations in Shrewsbury

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Belvidere	40	18%	15	7%	0	0%	160	72%	7	3%	**222**
Bicton	48	45%	2	2%	22	21%	34	32%	0	0%	**106**
Coleham	64	16%	2	0%	4	1%	326	81%	6	1%	**402**
Crowmoor	50	23%	0	0%	0	0%	170	77%	1	0%	**221**
Grange	57	27%	0	0%	0	0%	157	73%	1	0%	**215**
Greenacres	31	20%	3	2%	0	0%	119	78%	0	0%	**153**
Greenfields	84	30%	7	2%	17	6%	164	58%	12	4%	**284**
Harlescott	74	24%	17	6%	2	1%	188	61%	27	9%	**308**
Holy Cross	69	37%	2	1%	1	1%	99	53%	16	9%	**187**
Longden	49	49%	0	0%	43	43%	8	8%	0	0%	**100**
Longmeadow	71	31%	1	0%	0	0%	160	69%	0	0%	**232**
Martin Wilson	48	26%	4	2%	3	2%	115	62%	16	9%	**186**
Meole Brace	42	28%	0	0%	0	0%	98	64%	12	8%	**152**
Mount Pleasant	28	22%	0	0%	0	0%	99	76%	3	2%	**130**
Oakland	48	43%	0	0%	0	0%	62	56%	1	1%	**111**
Oxen	180	46%	9	2%	0	0%	202	52%	0	0%	**391**
Radbrook	93	40%	2	1%	1	0%	125	54%	10	4%	**231**
Severndale	13	11%	0	0%	95	83%	6	5%	0	0%	**114**
St. George's County	104	32%	11	3%	0	0%	186	57%	28	9%	**329**
St. Giles	162	51%	12	4%	0	0%	114	36%	29	9%	**317**
St. ucials	42	46%	0	0%	35	38%	14	15%	0	0%	**91**
St. Mary's Catholic	93	56%	0	0%	8	5%	59	36%	6	4%	**166**
St.Thomas & St.Anne's	64	70%	2	2%	4	4%	22	24%	0	0%	**92**
Trinity	47	34%	0	0%	51	37%	40	29%	0	0%	**138**
Wilfred Owen	26	14%	0	0%	2	1%	158	84%	3	2%	**189**
Average		**33%**		**1%**		**10%**		**52%**		**3%**	

Table 5: 2007 Modal Split for Primary Schools in Shrewsbury Study Area

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Belvidere	42	19%	2	1%	1	0%	169	77%	5	2%	**219**
Bicton	75	68%	0	0%	14	13%	19	17%	3	3%	**111**
Coleham	91	22%	8	2%	3	1%	295	72%	10	2%	**407**
Crowmoor	43	20%	1	0%	0	0%	166	79%	0	0%	**210**
Grange	49	24%	2	1%	0	0%	157	75%	0	0%	**208**
Greenacres	25	15%	4	2%	4	2%	136	80%	0	0%	**169**
Greenfields	81	25%	7	2%	17	5%	208	65%	9	3%	**322**
Harlescott	72	26%	7	3%	0	0%	186	68%	9	3%	**274**
Holy Cross	55	30%	3	2%	0	0%	112	60%	16	9%	**186**
Longden	40	44%	0	0%	41	46%	9	10%	0	0%	**90**
Longmeadow	52	23%	0	0%	0	0%	170	76%	1	0%	**223**
Martin Wilson	40	22%	2	1%	3	2%	123	69%	11	6%	**179**
Meole Brace	51	35%	0	0%	0	0%	91	63%	3	2%	**145**
Mount Pleasant	18	15%	0	0%	0	0%	80	68%	20	17%	**118**
Oakland	33	32%	0	0%	0	0%	64	62%	7	7%	**104**
Oxen	194	49%	6	2%	0	0%	191	48%	5	1%	**396**
Radbrook	90	41%	5	2%	0	0%	121	55%	5	2%	**221**
Severndale	17	11%	3	2%	124	83%	5	3%	0	0%	**149**

St. George's County	119	36%	2	1%	0	0%	182	55%	30	9%	**333**
St. [illegible]	167	51%	8	2%	0	0%	132	40%	23	7%	**330**
St. Lucia's	50	45%	7	6%	36	33%	17	15%	0	0%	**110**
St. Mary's Catholic	84	52%	1	1%	7	4%	67	41%	3	2%	**162**
St.Thomas & St.Anne's	64	61%	3	3%	5	5%	33	31%	0	0%	**105**
Trinity	40	31%	0	0%	50	39%	39	30%	0	0%	**129**
Wilfred Owen	38	16%	0	0%	1	0%	192	83%	0	0%	**231**
Average		**33%**		**1%**		**9%**		**54%**		**3%**	

Table 6: 2009 Modal Split for Primary Schools in Shrewsbury Study Area

Secondary School Travel Plans

Tables 7, 8 and **9** below set out the STPs that are currently in place for secondary schools within the Shrewsbury study area, together with their mode shift performance derived from PLASC returns and 'Hands Up' surveys carried out by the local authority in 2001, 2007 and 2009 respectively. This is supported by **Figure 3** above which locates these schools on a map.

The situation here is also established with little change between 2007 and 2009. Across the 6 secondary schools around 20% now come by car, a slight increase over the 19% in 2007. Bus has stabilised at around 8% mode share, as has walking and cycling (58% / 10%). For the secondary sector cycling is increasing, and assign the Cycle Town programme anticipates further increases as the STP's reinforce the use of cycling.

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Belvidere	57	8%	19	3%	27	4%	574	80%	37	5%	**714**
Meole Brace	175	17%	168	16%	263	25%	369	35%	68	7%	**1043**
Sundorne	0	0%	0	0%	0	0%	0	0%	0	0%	**0**
The Grange	5	1%	7	1%	20	3%	516	90%	25	4%	**573**
The Priory	137	20%	133	19%	88	13%	255	36%	89	13%	**702**
Wakeman	65	12%	34	6%	86	16%	301	57%	43	8%	**529**
Average		**10%**		**8%**		**10%**		**50%**		**6%**	

Table 7: 2001 Modal Split for Secondary Schools in Shrewsbury Study Area

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Belvidere	112	14%	0	0%	26	3%	617	76%	55	7%	**810**
Meole Brace	271	26%	117	11%	236	23%	323	31%	97	9%	**1044**
Sundorne	54	12%	4	1%	80	18%	278	61%	40	9%	**456**
The Grange	52	10%	0	0%	16	3%	402	81%	26	5%	**496**
The Priory	244	31%	30	4%	8	1%	360	45%	150	19%	**792**
Wakeman	114	20%	15	3%	89	15%	318	55%	45	8%	**581**
Average		**19%**		**3%**		**10%**		**58%**		**9%**	

Table 8: 2007 Modal Split for Secondary Schools in Shrewsbury Study Area

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Belvidere	126	15%	11	1%	12	1%	609	74%	58	7%	**816**
Meole Brace	270	28%	49	5%	175	18%	290	30%	157	16%	**941**
Sundorne	69	15%	3	1%	39	8%	321	69%	20	4%	**452**
The Grange	53	11%	7	1%	10	2%	393	80%	20	4%	**483**
The Priory	238	29%	65	8%	8	1%	342	42%	148	18%	**801**
Wakeman	103	23%	9	2%	64	14%	230	50%	41	9%	**447**
Average		**20%**		**3%**		**8%**		**58%**		**10%**	

Table 9: 2009 Modal Split for Secondary Schools in Shrewsbury Study Area

Workplace Travel Plans (WTP's)

Table 10 below sets out the WTP's currently in place within the study area. This Table is supported by **Figure 3** above which provides an illustration of the location of these WTP's.

Business
Telephone House Site Shrewsbury
Sundorne Sports Village, Shrewsbury
Lidl Foodstore, Harlescott Lane, Whitchurch Road, Shrewsbury
BT Shrewsbury, Communications House, Travel Plan
B&Q Mini Warehouse, Shrewsbury, Featherbed Lane
Shrewsbury Town Football Club

Table 10: List of Workplaces in Shrewsbury Study Area with a Travel Plan

Travel Plan Reviews

In order to assess the quality and robustness of Travel Plans in the Shrewsbury area, we carried out a review of all WTP's and sample STP's. This is to ascertain the range and relative quality of the Travel Plans and particularly whether they have gone beyond the stage of being 'statements of intent'. The challenges surrounding this issue are also covered in the qualitative section below.

Schools Sector

In terms of the quality of Travel Plans, 6 primary and 3 secondary schools were selected from the full schedule and appraised in more detail. This tackled robustness, quality, approach and longevity and whether the Travel Plan had gone beyond a statement of intent. Using a proforma approach the Travel Plans were assessed in an independent manner, assessing whether the DfT / DSCF requirement for every school to have an operational Travel Plan was resulting in real modal shift (or retention). The school run is also a helpful indicator of the temperature of the town in terms of its cultural base.

The proformas in appendices 5q summarise the content and issues surrounding all STPs in Shrewsbury. These STPs have been produced using a common template ensuring that monitoring regimes are consistent.

Not all schools however have appointed an STP co-ordinator and rely on support from Shropshire Council which is limited in capacity.

Workplace

The proformas in appendices 5q summarise the content and issues surrounding all WTPs that could be sourced within the study time period. As with the schools process, the diagnosis is designed to evaluate whether Travel Plans as a tool has passed beyond the 'statement of intent' stage, and whether there is any marked difference in compliance and monitoring between voluntary and planning-led Travel Plans.

In order to assess the quality and robustness of Travel Plans in the Shrewsbury area, we carried out a review of all WTP's and sample STP's. This was to ascertain the range and relative quality of Travel Plans and particularly whether they have gone beyond the stage of being 'statements of intent'. The challenges surrounding this issue are also covered in the qualitative section below.

Diagnosis

The workplace travel situation has been evaluated using 6 sample sites covering TPs secured voluntarily or through the planning process.

The forward prognosis for WTP's is that they should feature strongly within any forward strategy, but baseline data and target setting / monitoring needs tightened. Many of the Travel Plans did not declare a 'starting-point' modal split with only one of the sample plans providing baseline information. The menus of measures tend to be generic without detailing the actual capacity of the organisation to change modal shift, and whilst monitoring is promised through annual surveys the impression is that these are more 'intent' based Travel Plans.

It should also be noted that the planning-led Travel Plans were developed some time ago prior to the latest best practice thinking on Travel Plans and the Planning Process becoming available (DfT April 2009).

However, the issue is that the WTPs within the Shrewsbury study area have not been reviewed since their conception. Therefore, it is not possible to ascertain whether the targets in the original documents have been achieved or not. Only one of the Travel Plans reviews the baselines conditions and provides an existing modal split. The majority of the documents reviewed are purely aspirational and that initial surveys were not undertaken prior to the document being written. Therefore, it is not clear what the initial modal split was at the time of the documents conception, nor is it clear what modal split the workplace aspires to. Reviews of these documents need to be made by the company in question to ascertain whether any improvement in modal shift has been made.

All WTP's offer an assurance of robust monitoring of progress for the Travel Plan, underpinned by annual surveys. The measures outlined are all based around the same standard themes in terms of the way car sharing and sustainable transport are conceived and promoted. However, without current modal split data, it is difficult to determine whether any of these measures have influenced any kind of modal shift.

SMoTS

The SMoTS strategy for Shropshire County Council (SCC) sets out SCC's updated sustainable school strategy rolling forward the original school travel strategy published in 2005. Covering the period 2005 – 2011, the SMoTS is very clear on measurement and monitoring, and put forward a comprehensive action plan.

Diagnosis

Across SCC as a whole, cycling and walking have shown year on year increases, with a slight decline in car use.

The 10 key objectives set out by SCC not only cover STP development and operation but make strong reference to halt and wellbeing agenda, informing parental choice on admissions, home to school transport and integration of best practice into forward planning of new build and extended school provision.

This means that any DaSTS works based on the 'schools market' within Shrewsbury is already built on a firm foundation and, given the SCC's mature approach in this area, is likely to bring high BCR's in terms of further scheme investment. SCC have already recognised the value of area wide school travel initiatives in the strategy, and many of these interventions have been tested through the RAG review. Presence of resilient safer routes to school prioritisation process will also ensure infrastructure interventions continue to be targeted where they will have them most impact on safety/highway issues and modal shift.

Publications and Promotional Material

The list below contains a listing of all the key promotional and information materials used by the local authority, whether produced directly or brokered to the public/target audiences. The qualitative section below reflects on the order of priority of these tools, and which publications are seen as essential for ongoing, effective communication of smarter choices messages:

- Shrewsbury Cycle Rides - 4 Cycle Routes
- Ellesmere Cycle Rides - 5 Cycle Routes
- Bishop's Castle Cycle Rides - 4 Cycle Routes
- Bikeability Cycle Training
- Shrewsbury Walking & Cycling Map
- Shrewsbury Park & Ride
- TravelSmart - better ways to go
- A Driver's Guide - On the move with the Earth in Mind
- Arriva Bus Times Route 8

- How to Find Shirehall
- Shropshire Link…Zone 1 including Pontesbury, Minsterley and Bishop's Castle
- Shropshire Link…Zone 2 including Bishop's Castle, Bucknell, Clun and Craven Arms
- Shropshire Link…Zone 3 including Ludlow, Cleobury Mortimer and Burford
- Shropshire Link…Zone 4 including Bridgnorth Shifnal and Sheriffhales
- Shropshire Link…Zone 5 including Ludlow, Church Stretton, Bridgnorth and Much Wenlock
- Shropshire Link…Zone 6 including the Shresbury Rural Area
- Shropshire Link…Zone 7 including Whitchurch, Ellesmere, Wem & Market Drayton
- Shropshire Link…Zone 9 including Oswestry, Nesscliffe and Ellesmere
- Arriva Train Train Times (1) - Swansea to Shrewsbury & Cambrian Coast/Chester to Birmingham
- Arriva Train Train Times (2) - South Wales to North Wales & Manchester
- Shropshire Bus Timetable - Service 435 - Ludlow to Shrewsbury
- Zone 1 Map - including Pontesbury, Minsterley and Bishop's Castle
- Shropshire Bus Timetable - Service 501 - Shrewsbury to Ellesmere
- Train Times & Fares - Wrexham - Shrewsbury -Telford - London Marylebone
- London Midlands Train Times - Shrewsbury to Birmingham New St

Diagnosis

SCC has a comprehensive range of publicity and promotion available with additional products planned for 2010. These are being effectively by officers to reach target markets (i.e. schools, cyclists, workplaces etc) although the cycling theme is particularly strong.

Qualitative Diagnosis

This section is based on an interview carried out on 26th January 2010 with the sustainable transport team at SCC.

School Travel Planning

The schools which have shown an increase in car use generally have a large rural catchment and only a limited number of pupils can reach the site by walking, cycling or public transport (e.g. Bicton School). Where schools such as this have been the result of site consolidation, often those previously using the bus service now find themselves ‘out of catchment’ with long-term bus subsidy not a realistic option.

As a county town, Shrewsbury has a magnetic effect on school run traffic with some parents electing to send their children to schools in the city to make family logistics easier and to tackle issues of childcare. An example of this is at Coleham School, which is the nearest school to the city centre, and provides easy drop-off for parents working in the town centre.

There are also localised circumstances, such as Meole Brace, where infants still walk to site, whilst junior age children have seen an increase in pass-by car trips, associated with parents returning to work. Sevendale Special School also serves the

whole County and brings with its own special 'Home to School' transport considerations and restrictions.

Both Priory and Meole secondary schools have benefited from investment in cycling measures complemented by a strong ethos within the school towards cycling. The combined impact of the behavioural and infrastructure interventions has resulted in a very healthy mode shift overall, particularly towards cycling. Belvedere, in contrast, is a 'local' school in terms of catchments and has maintained a healthy walking mode split.

Overall Shrewsbury is 'holding its own' in terms of freezing the mode shift towards car use. Between 2008 and 2009 the walking mode split rose form 42% to 43% and cycling from 2.3% to 2.6% overall. However, there is a suspected transfer between walking and cycling rather than abstraction from car.

Underlying this there is a marked different between the northern schools, which are more clustered, and travel to school patterns in the south of the town. Whilst Shrewsbury acts as a magnet for school run traffic, there is also out-movement to places such as Church Stretton where parents are electing to send their children to a rural secondary school.

School Travel Data and Surveys

In terms of the PLASC data, it should be noted that this only affects mode split data for 2007 to 2009 and prior to this Hands Up surveys were carried out .DSCF have advised local authorities not to carry out Hands Up surveys but this prevents SCC from validating the mode split data accurately.

Further weaknesses in the data sets include reporting of the journey mode on arrival at the school gate (as opposed to the whole journey) and the risk that schools are only surveying their new pupils (via the parent PLASC return) and not tracking changes in behaviour as children progress through the school. This is evidenced by 'static' reports on Years 7 to 11 when a change would be expected when, for example, cycle training or cycle parking provision was installed in the school. However, overall the cycling data for secondary schools appears to be more reliable.

A further weakness is the fact that the travel census is carried out in January and whilst the 'normal' mode of travel is requested, the temptation to put down the 'winter' mode as the norm may result in under-representation of cycling and walking.

Finally, cycling is likely to be underreports as the PLACS questionnaire is sent home for parents to complete.

School Travel Planning – Resources and Planning Ahead

SCC has already met its target of having every school covered by a Travel Plan and is now carrying out reviews. The priority for the authority is to focus on new and merged schools up to the 31st March 2010.

The team consider that a move towards more strategic support and strategy is now needed, using online tools and similar resources to help the schools maintain their Travel Plans and to deal with the detail at a local level. Staff resourcing should remain at 1.75 FTE, but at present 1 FTE remains vacant.

Whilst performance on securing Travel Plans has been robust, a key challenge will be the parochial perspective on transport and traffic issues that still remains within local culture. In North Shrewsbury this local affinity to a tight neighbourhood area is particularly strong, with more 'right to choose' being exercised in the south.

Schools and the Development Process

There are good examples of where walking and cycling linkages and the encouragement of active travel have been supported by individual schools.

In Ditherington, a major planning application for housing in Spring Gardens could have been seen as a threat but the Head of the local school proactively asked for 'short-cut' routes to be provided for pedestrians and cyclists.

Similarly at Greenacres Primary, where historically cycling had not been on the agenda, through investment in infrastructure and support from the Bike It programme the overall attitude and profile of cycling has been turned around. However, this example also stresses the importance of joining up investment, training and softer measures into an integrated package to achieve discernible modal change.

School Support Programmes

As a result of the Cycle Shrewsbury programme (DfT Cycling Town) 9 schools have been targeted for new cycle parking provision. Scooter parking has also been installed at some schools in the past.

Promotion events such as Walk to School Week (run with Living Street, GDBA etc) have also been run twice a year Walk on Wednesdays has also been promoted by some schools, making their own purchases for resources.

A Silver and Gold Award scheme operates for schools to reward them corporately for what they have done to keep the momentum going on their Travel Plan. To be eligible for a gold award, a modal shift must be demonstrated and the school received a £250 reward.

Step Out pedestrian training, road strategy training (Yrs 3-4) and cycle training (Yrs 5-6) are also offered, with both a cycle training co-ordinator (in charge of 2-3 teams) and pedestrian trainers in post.

Cultural Issues

Whilst accessibility within the main urban area of Shrewsbury is generally good, many people still perceive that they live in a 'rural location' so do not consciously think about alternatives to the car. Apart from those who can avail themselves of free bus transport, or have to rely on public transport as their only means of access, most people elect to use car unless they are in easy walking distance of the town centre or its transport interchanges. Rail use is predominantly for eastern and southern corridors despite a 'clockface' style network into Mid/North Wales and Crewe /Chester.

Workplace Travel Planning

Despite Travel Plans being put in place there has been little emphasis on following these up in terms of performance. Three key companies have moved forward with Travel Plans but no SCC re-survey has taken place.

Whilst the CSR agenda is helpful, trying to enforce Travel Plans or encourage businesses to carry out voluntary updates is difficult.

There is a strong link between the Health PCT and the Council, with Shrewsbury General Hospital now advancing its Travel Plan. Driven from the facilities angle, the hospital is now moving forward with its Travel Plan with a strong emphasis on cycling and health.

Conversely, Shropshire PCT originally developed a Travel Plan strategy using support from the Energy Savings Trust as early as 2004 but this has still not been elevated to Board level for endorsement and support. This is generally the case across businesses with little high level commitment.

A key success story however is SCC's own Travel Plan which is being taken forward corporately with strategic endorsement from the Chief Executive. Catering for nearly 2000 staff in Shrewsbury (including 400 in the Guildhall and 800 in Shire Hall) there is now a concerted effort to lead by example and to push the Travel Plan harder within the organisation.

In terms of incentives and measures these include:

- Pool cars (total of 5)
- Cycle2Work programme (from May 2010)
- On line booking of pool vehicles
- Increased cycle parking at Shire Hall and other key locations
- Setting up of Bicycle User Group
- 10% discount for those not driving alone in Shrewsbury shops
- Car share scheme – there is a database of 88 names of which 50 are actively sharing
- New joiners have to actively 'opt out' of the car share scheme when they join to encourage membership

- Strategic review of mileage rates, essential users and parking as part of the consolidation of the former District and County Council buildings portfolio and employee/service relocation process

A travel survey is shortly to be issued (Feb 2010) and results will inform the refreshment of the Corporate Travel Plan, due by April 2010.

Obstacles that have been raised by staff are also symptomatic of barriers facing other employers, i.e.

- Flexitime makes it difficulty to adopt car sharing and to take up other scheme which rely on fixed time of travel
- Perceived inconvenience of car sharing or public transport usage
- Relatively generous parking provision which gives little incentive to switch mode
- Congestion itself is not a penalty in Shrewsbury

Whilst some of the bus fares into Shrewsbury are less than the perceived and actual costs of motoring (i.e. a carnet ticket in Shrewsbury from 20+ miles away costs £1.75 for the whole journey) the general public are not yet making this connection.

Park and Ride is an option that can be developed to encourage park and car share, or park and cycle, but the opening times of the park and ride are not conducive to later evening use. Lift sharing relies on use of the main national lift share website to keep costs down and to avoid double handling of customers that a dedicated County site would generate.

Target Markets

The user of travel behaviour change interventions needs to target both longer distance, strategic trips (e.g. rail to Birmingham) but also tackle the local trips made within the town boundary.

Cycle Shrewsbury

As a DfT Cycling Town, the investment in cycling infrastructure (routes and parking provision) has provided a clear lever for the promotion of smarter choices generally. In particular this has proved successful within the school sector.

An Employers Pack designed specifically to promote cycling has also recently been launched

Promotional Material

Maps are considered to be the most important resource mechanism, with walk/cycle and bus maps available to the public. Isochrones mapping is also planned, and location specific maps (i.e. centred on Shire Hal) have also been produced

Development Challenges

SCC has an open mind on how smarter choices can be secured through the planning process. Whilst there is no SPG/SPD at present, the need to secure cycling and walking infrastructure, public transport investment and tighter commitment to smarter choices through Travel Plan guidance is recognised. At present the Section 106 route is not used for the securing of Travel Plans and relies on conditions being applied which in turn makes enforcement more difficult. Mechanisms to ensure Smarter Choices resources and performance targets are secured and safeguarded are important considerations that will need to be taken account of in the LDF and DaSTS processes.

Appendix 7c: Smarter Choices Health Check Report: Hereford

Appendix 7c: Smarter Choices Health Check Report: Hereford

Evaluation of Key Data

Car Ownership/Access to Car

Table 1 sets out the car ownership and access statistics for Hereford, as recorded in the 2001 census.

Area	Households with at least 1 car	Households with no car	Cars Per Household
Hereford	73.7%	24.9%	1.1
West Midlands Region	73.2%	26.8%	1.1
England and Wales	73.2%	26.8%	1.1

Table 1: Car Ownership/Access to Car in Hereford

Hereford has slightly more households with at least 1 car than the regional and national figures and the same number of cars per household. Hereford has the least percentage of households with access to a car of the three towns. With slightly less than three quarters of households having access to a car, car ownership and access in Hereford can be judged to be good.

Journey to Work

Table 2 sets out the mode of transport used to travel to work by the resident population of Hereford, as recorded in the 2001 census.

Area	WFH	Metro light rail or tram	Train	Bus or coach	Taxi	Driving car or van	Pax in car or van	Motorbike scooter or moped	Cycle	Walk	Other
Hereford	9.4%	0.1%	0.6%	4.7%	0.5%	53.6%	6.6%	1.4%	7.7%	15.0%	0.5%
West Midlands Region	8.9%	0.2%	1.5%	8.8%	0.4%	60.0%	7.2%	0.9%	2.3%	9.5%	0.3%
England & Wales	9.2%	3.0%	4.1%	7.4%	0.5%	55.2%	6.3%	1.1%	2.8%	10.0%	0.5%

Table 2: Modal Split for Journeys to Work (Local, Regional & National)

Sustainable transport is used in 32% of journeys to work, originating from Hereford, which is considerably higher than 21% for the West Midlands and 21% for England and Wales. Whilst working from home is slightly above the regional and national figures, cycling and walking is much more prevalent in Hereford than in the rest of

the country, with more than double the national percentage of cycle journeys and 50% more walking journeys to work.

Health Indicators

Table 3 sets out the health indicators for Hereford, as recorded in the 2001 census. The wellness percentage has been derived by use of a weighted average scoring system, dependant on how a census respondent assessed their health at the time of record. Good health responses were awarded a score of 1, fair health responses were awarded a score of 0.5 and those not in good health were awarded a score of 0.25.

Area	Wellness Score	Long Term Illness
Hereford	81.1%	18.8%
West Midlands Region	82.0%	18.2%
England and Wales	81.2%	18.9%

Table 3: Percentage Healthy & With Long-Term Illnesses

Hereford assesses itself to be in slightly worse health than the West Midlands region and England and Wales. There is a higher percentage of long term illness in Hereford when compared to the West Midlands region however a slightly smaller percentage of people have a long term illness when compared to the national statistics. **Figures 1** and **2** below illustrate the percentage of wellness and long term illnesses throughout Telford respectively.

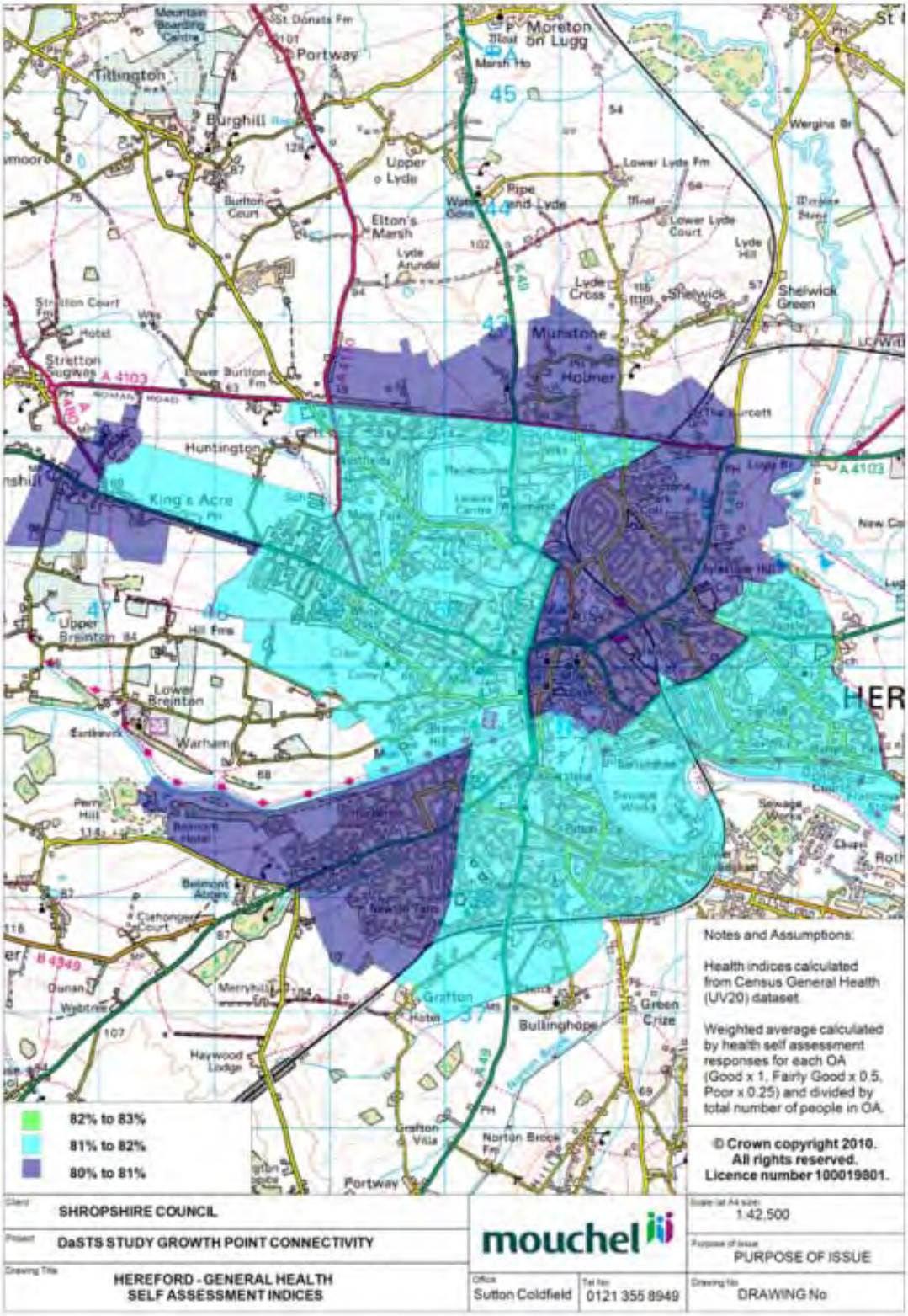

Figure 1: Health Self Assessment Percentage Map

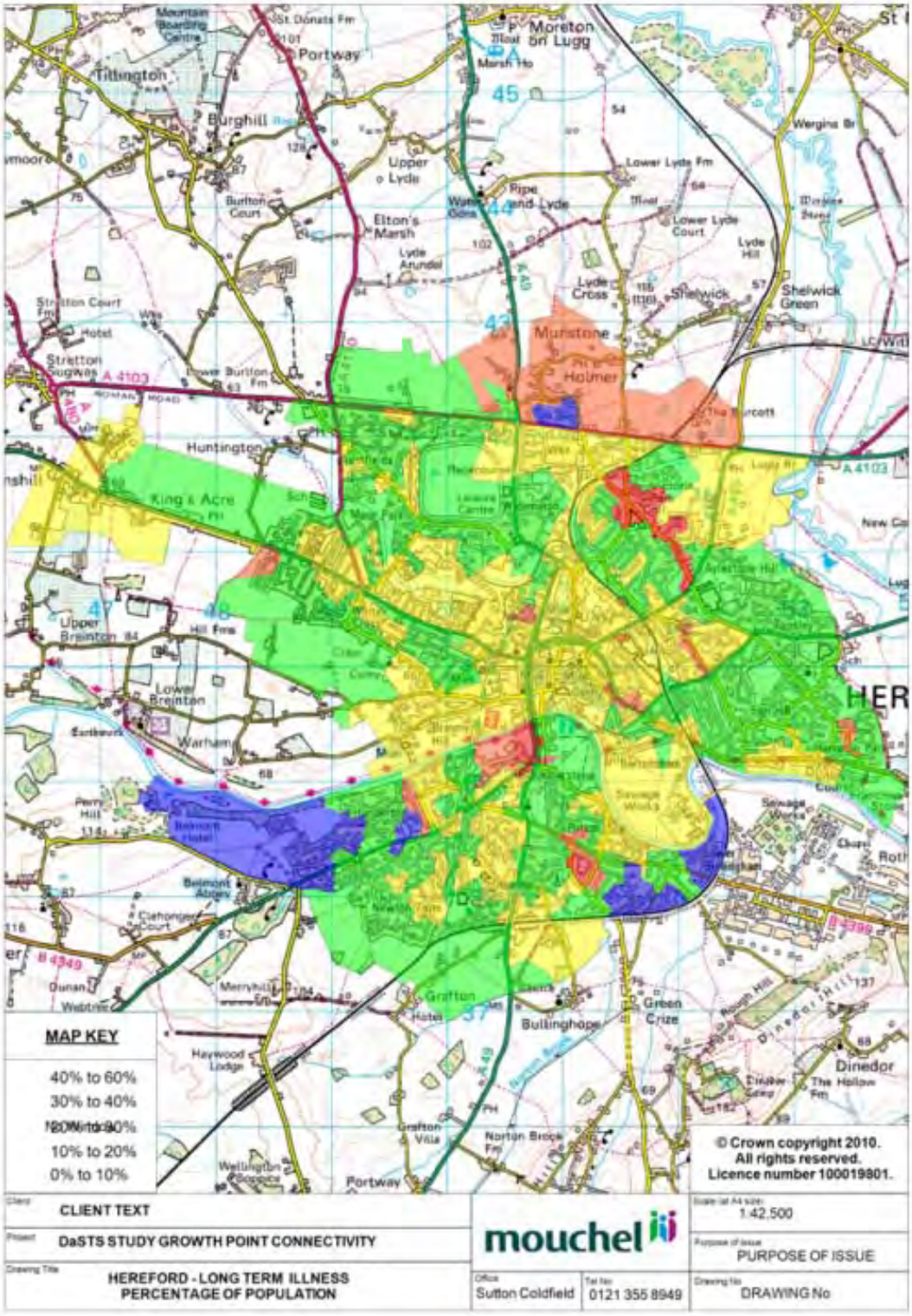

Figure 2: Long Term Illnesses Percentage Map

Travel Plan Intelligence

Primary School Travel Plans

Tables 4 and **5** below set out the STPs that are currently in place for primary schools within the study area, together with their mode shift performance derived from PLASC returns and 'Hands Up' surveys carried out by the local authority in 2007 and 2009 respectively. This is supported by **Figure 3** below which locates these schools on a map. Overall car use has declined from a 36% mode share in 2007 to a 34% mode share in 2009. Data from school surveys prior to 2007, whilst not collected in the same way as the PLASC census, shows that there has been a swing away from car usage due to the success of the school travel programme. In the period 2007-2009 walking has increased from 54% to 55% reflecting successes the local authority in maintaining and developing STPs.

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Broadlands	133	38%	104	29%	4	1%	110	31%	2	1%	**353**
Hampton Dene	71	44%	34	21%	0	0%	51	32%	4	3%	**160**
Lord Scudamore	282	48%	0	0%	17	3%	275	47%	10	2%	**584**
Marlbrook	0	0%	0	0%	0	0%	438	100%	0	0%	**438**
Our adyts	100	53%	9	5%	0	0%	62	33%	16	9%	**187**
Riverside	0	0%	0	0%	0	0%	81	100%	0	0%	**81**
St Francis Xavier's	91	46%	6	3%	21	11%	80	40%	0	0%	**198**
St James'	72	37%	3	2%	0	0%	103	53%	16	8%	**194**
St artin's	107	29%	0	0%	0	0%	262	70%	5	1%	**374**
St Paul's	215	58%	18	5%	0	0%	138	37%	2	1%	**373**
St Thomas Cantilupe	93	43%	0	0%	7	3%	114	52%	4	2%	**218**
Trinity	211	41%	15	3%	0	0%	271	53%	13	3%	**510**
Average		**36%**		**6%**		**1%**		**54%**		**2%**	

Table 4: 2007 Modal Split for Primary Schools in Study Area

Primary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Broadlands	90	34%	58	22%	3	1%	112	43%	0	0%	**263**
Hampton Dene	78	36%	18	8%	0	0%	117	53%	6	3%	**219**
Lord Scudamore	286	47%	0	0%	13	2%	303	50%	5	1%	**607**
Marlbrook	130	30%	0	0%	0	0%	280	64%	27	6%	**437**
Our adyts	65	31%	77	37%	0	0%	63	30%	2	1%	**207**
Riverside	82	22%	2	1%	1	0%	273	75%	8	2%	**366**
St Francis Xavier's	94	46%	13	6%	16	8%	80	39%	3	1%	**206**
St James'	51	26%	1	1%	0	0%	143	72%	4	2%	**199**
St artin's	87	24%	6	2%	0	0%	275	75%	0	0%	**368**
St Paul's	172	40%	48	11%	0	0%	209	48%	2	0%	**431**
St Thomas Cantilupe	74	36%	1	0%	3	1%	123	60%	5	2%	**206**
Trinity	218	40%	29	5%	0	0%	283	52%	14	3%	**544**
Average		**34%**		**8%**		**1%**		**55%**		**2%**	

Table 5: 2009 Modal Split for Primary Schools in Study Area

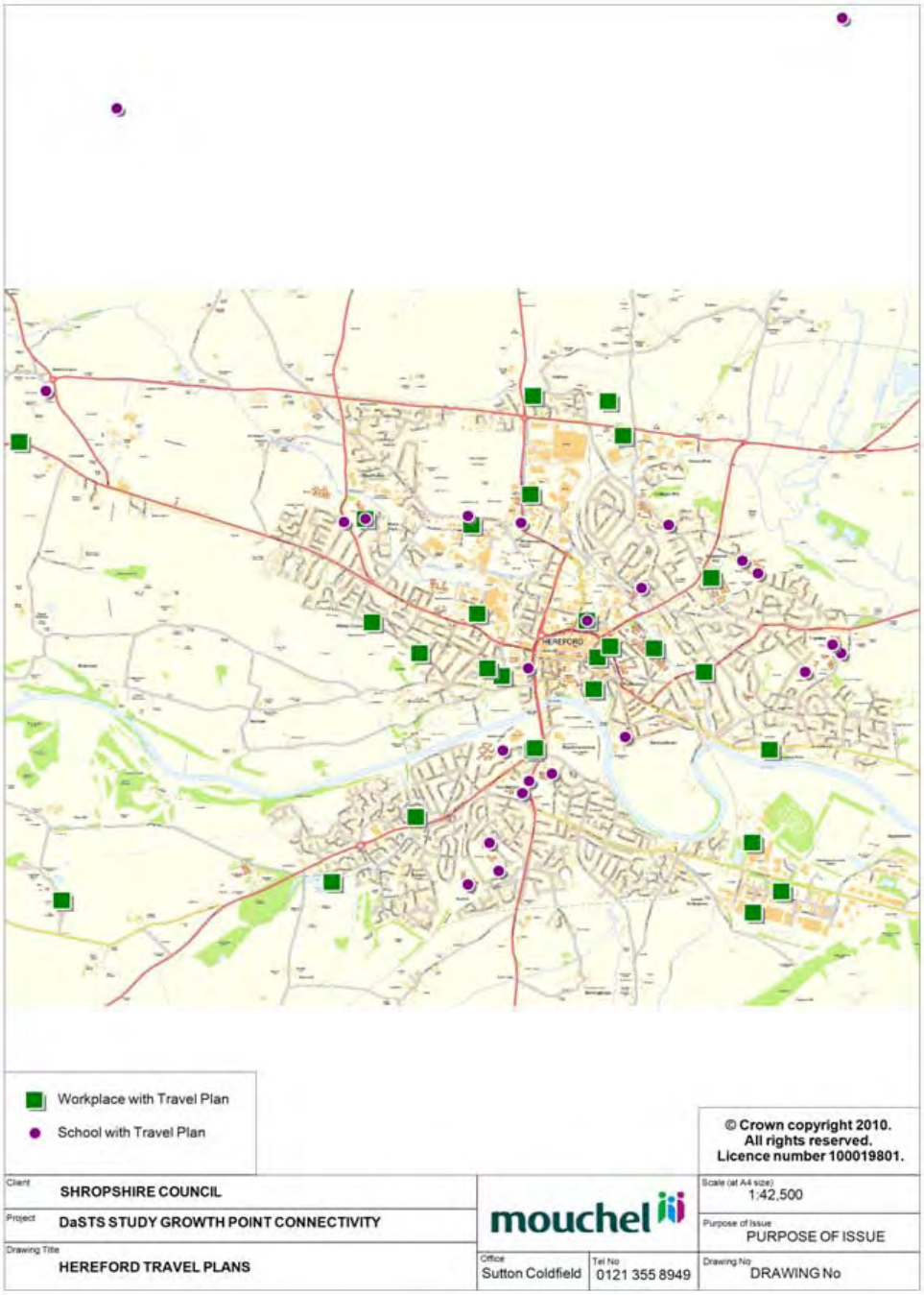

Figure 3: School & Workplace Travel Plan Locations in Hereford

Secondary School Travel Plans

Tables 6 and **7** below set out the STPs that are currently in place for secondary schools within the study area, together with their mode shift performance derived from PLASC returns and 'Hands Up' surveys carried out by the local authority in 2007 and 2009 respectively. This is supported by **Figure 3** above which locates these schools on a map.

The situation here is also established, with little change between 2007 and 2009. Across the 4 secondary schools around 18% now come by car, with slight increase in walking. Bus has seen a slight decline from 19% to 17% mode share between 2007 and 2008.

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Aylestone	87	14%	60	10%	197	31%	265	42%	19	3%	**628**
Bishop of Hereford's Bluecoat	224	32%	20	3%	243	35%	201	29%	8	1%	**696**
Haywood	44	6%	0	0%	11	2%	649	89%	27	4%	**731**
Whitecross	154	18%	5	1%	55	6%	574	65%	91	10%	**879**
Average		**17%**		**3%**		**19%**		**56%**		**5%**	

Table 6: 2007 Modal Split for Secondary Schools in Study Area

Secondary School	Car	%	Car Share	%	Bus	%	Walk	%	Cycle	%	Total
Aylestone	149	18%	55	7%	227	28%	366	45%	23	3%	**820**
Bishop of Hereford's Bluecoat	319	27%	33	3%	401	34%	408	35%	8	1%	**1169**
Haywood	44	6%	7	1%	0	0%	603	88%	29	4%	**683**
Whitecross	182	21%	8	1%	50	6%	507	58%	121	14%	**868**
Average		**18%**		**3%**		**17%**		**57%**		**5%**	

Table 7: 2009 Modal Split for Secondary Schools in Study Area

Workplace

Table 8 below sets out the WTP's currently in place within the study area, together with any zonal Travel Plans set up. An indication of whether these have been secured through the planning process or are voluntary is also included. This is supported by **Figure 3** above which locates these WTP's on a map.

Hereford Hospital NHS Trust
Sainsburys, Barton Yard
Gelpack Excelsior
Hereford Cathedral Junior School
Herefordshire Housing
Herefordshire Council
Workmatch/ Able
Hinton Community Centre
Clifford House School (Trinity)
Quay House Medical Centre
Asda
Travelodge, Pomona Place
B&Q/Halfords Retail Units
Crest Homes, Holmer Rd
Crematorium
Belmont Residential Devpt
Rose Gardens, Ledbury Road
Hereford VI Form College
Three Counties Hotel
West Mercia Police, Barton Road
Herefordshire Voluntary Action
Holmer Park Health Centre
Hampton Park Nursing Home

Table 8: List of Workplaces in Hereford Study Area with a Travel Plan

Other

In terms of RTP's and other specialist land uses, the local authority has been working with developers in the Bullinghope area on residential travel planning but generally its scope has been limited to date.

Travel Plan Reviews

In order to assess the quality and robustness of Travel Plan in the Hereford area, we carried out a review of all WTP's, and sample STP's. This is to ascertain the range and relative quality of the Travel Plans, and particularly whether they have gone beyond the stage of being 'statements of intent' and transitioned into 'living documents' which have a realistic chance of achieving longer term modal shift. The challenges surrounding this issue are also covered in the qualitative section below.

Schools Sector

In terms of the quality of Travel Plans, 6 primary and 3 secondary schools were selected from the full schedule and appraised in more detail. This tackled robustness, quality, approach and longevity and whether the Travel Plan had gone beyond a statement of intent. Using a proforma approach the Travel Plans were assessed in an independent manner, assessing whether the DfT/DSCF requirement for every school to have an operational Travel Plan was resulting in real modal shift

(or retention). The school run is also a helpful indicator of the temperature of the town in terms of its cultural base.

The proformas in Appendices 5r summarise the content and issues surrounding all STP's. For Herefordshire, based on this sample, it is difficult to discern if any specific measures are particularly successful in realising modal shift. However where the STP is being successful in achieving modal change is based on human factors i.e. how well the TP has been 'sold' / received, and how seriously it is being taken by the school staff and parent, Its positioning with the structure of the school (including appointment of a STP Co-ordinator) and its embedding in school culture is the key driver for success in these instances.

Workplace

The proformas at the end of these appendices summarise the content and issues surrounding all WTPs that could be sourced within the study time period. As with the schools process, the diagnosis is designed to evaluate whether Travel Plans as a tool has passed beyond the 'statement of intent' stage, and whether there is any marked difference in compliance and monitoring between voluntary and planning-led Travel Plans.

Diagnosis

The workplace travel situation has been restricted to consideration of Herefordshire County Council's (HCC) own staff Travel Plan, and the Rotherwas zonal Travel Plan, the only large scale operational zonal plan in the 3 growth towns.

There is a summary proforma in Appendices 5r for the Rotherwas site. The forward prognosis for this zonal Travel Plan is extremely strong, based upon a reduction in SOC car use from 70% in 2003 to 69% in 2008. The presence of an on site coordinator (P/T) plus planning development control issues for further phases on the industrial estate have locked in commitment for the plan, and a wide range of interventions have been considered. Clear targets and measures are included in the plan, with demonstrable commitment to delivery. This plan is the flagship programme for Hereford, but it is unique in terms of scale and complexity within the town.

There is also a pro forma for HCC's Travel Plan. HCC has fully recognised the need to lead by example and to use HCC's Travel Plan as the exemplar tool to encourage other organisations to participate in TP programmes. Over the 6 years from 2003 to 2009 the number of journeys per person per week has decreased from an index of 6 to 4.8, with increases in walking, cycling and bus use. Car share has stabilised but this may be due to cultural issues causing a natural 'ceiling; to be reached in terms of capacity to car share.

SMoTS Strategy

The Sustainable School Modes of Travel Strategy (SMoTS) for HCC published in April 2009 underpins and forms the basis of ongoing work already being carried out

for the Local Transport Plan 2006/7-2010/11, the School Travel Strategy and the Accessibility Strategy. The SMoTS is very clear on measurement and monitoring, and put forward a comprehensive action plan.

Between 2004 and March 2009 STP's have been prepared, approved and implemented at 99 of the 103 state schools in Herefordshire as part of the Travelling to School Initiative (TTSI) initiated in 2003. The remaining 4 state schools should have a STP in place by March 2010.

The aims of the SMoTS strategy are to:

- improve accessibility to schools
- sustain environmental improvements due to reduced car use
- increase health benefits from more walking and cycling
- enhance child safety and security

The objectives of the SMoTS are to:

- develop the mapping and audit of school travel facilities over the next three years (2009-2012) which will enable the provision of schools and parents across Herefordshire with maps showing the sustainable transport provisions for each school in the County. This mapping will identify what schools are doing to tackle its travel issues

- have 100% of schools in Herefordshire with Travel Plans in place by 2011/12

- have the majority of Herefordshire Schools be actively engaged in promoting, implementing, reviewing and monitoring their Travel Plans

- have more children travelling to school by safe and sustainable methods

The targets of the SMoTS are:

- all state schools in Herefordshire to have a Travel Plan in place by March 2010

- all independent schools in Herefordshire to have a Travel Plan in place or be working towards a Travel Plan by March 2010

- an audit and mapping exercise to be carried out in 20 schools by March 2010

- 50% of schools with Travel Plans to have current Travel Plan Reviews in place by March 2010

<u>Cycling</u>

HCC has installed cycle parking in 38 schools to date and cycling is promoted for journeys to Herefordshire primary and secondary schools. Dual-use walking / cycle

paths form a significant part of the Safer Routes to school priority list. Free cycle training is carried out by HCC for KS1 children on the playground and for KS2 children on the road. Free cycle training for adults is also provided on a one-to-one basis.

Walking

HCC is to provide more cycling and walking routes throughout the county and at least 4 new routes are currently under construction. The Hereford Mini-map and the Ledbury mini-map which have been produced to show walking and cycling routes are available free (and on-line) to members of the public.

Car Sharing

HCC operates a car-sharing scheme called 'twoshare'. Potential users can log on to www.twoshare.co.uk to find a journey match. The scheme has been in operation since 2004 and is advertised in schools through their STP's.

Buses

Education transport is often combined with the public transport system and 10% of pupils now use the subsidised bus network. HCC provide home to school transport for SEN pupils under a policy that reflects the current legislative requirements.

Diagnosis

Between 2007 and 2009, the percentage of walking, cycling and bus trips has remained more or less constant for both primary and secondary schools. There has however been a reasonable decrease in the percentage of single occupancy cars and a slight increase in the number of car sharers.

The 7 key objectives set out by the SMoTS not only cover STP development and operation but make strong reference to halt and wellbeing agenda, informing parental choice on admissions, home to school transport and integration of best practice into forward planning of new build and extended school provision.

The SMoTS also recognises SMARTER choices by stating that *"STP's must include at least one SMART target (i.e. specific, measurable, achievable, realistic, with a set date) that the school community agrees to meet by a stated time".*

Any DaSTS works based on the 'schools market' within Herefordshire is already built on a firm foundation and, given HCC's mature approach in this area, is likely to bring high Benefit to Cost Ratios (BCR) in terms of further scheme investment. HCC has already recognised the value of area wide school travel initiatives in the strategy and many of these interventions have been tested through the RAG review. The presence of a resilient 'safer routes to school' prioritisation process will also ensure

infrastructure interventions continue to be targeted where they will have them most impact on safety/highway issues and modal shift.

Publications and Promotional Material

The list below contains all the key promotional and information materials used by the local authority, whether produced directly or brokered to the public/target audiences. The qualitative section below reflects on the order of priority of these tools, and which publications are seen as essential for ongoing, effective communication of smarter choices messages.

- Hereford Mini Map
- Herefordshire Leisure Cycle Guide
- Your Guide to Smart Driving
- "Every Step Counts" - Pedometer Journal & Guide to Walking for Health
- "Sunday Rover" - Unlimited Bus Travel in Herefordshire and Worcestershire on Sundays with one ticket
- Cycling - Security Matters
- twoshare.co.uk - links random drivers and passngers to share journeys
- "Nvr Miss Ur Bus" - get ur bus times by txt
- "Cycle for a better city…" by Cycle Hereford
- Bus times by txt - Service 476 - Hereford to Ledbury
- Cycle with Confidence - professional 1-2-1 adult cycle training
- Business Travel Fund
- Herefordshire matters - Residents' Guide magazine

Diagnosis

HCC has an extremely resilient and targeted method of producing material. Rather than appeal to very narrowly defined market segments, the production of the Hereford City Map has been the single most useful tool in promoting sustainable travel. Reasons for this are discussed in the Qualitative Section below.

Qualitative Diagnosis

This section is based on an interviews carried out on 22nd January 2010 with the Sustainable Transport Team at HC.

Travel Plans

Travel Plans – the danger of promoting standard measures in a 'non-Herefordshire' manner

Given the largely rural profile of Herefordshire, the bulk of employers are small in scale and many of the conventional travel planning measures that require 'critical mass' are often not viable (e.g. car-sharing). Some 86% of businesses in Herefordshire employ less that 10 people.

Whilst Hereford, as the principal county town, has a clear ‘magnet’ role, again the dispersed nature of home locations, lack of penetration of rural bus services, and shift/flexible working across the business/manufacturing/logistics and service sectors means that smarter choices cannot be ‘sold’ in a conventional way because of the catchment characteristics and cultural background.

Coupled to this, much of the national guidance of Travel Plans etc is often seen as ‘overkill’ and too daunting by SME’s and smaller local businesses so a simpler, less onerous method for engaging these businesses is important to HCC. However, where zonal Travel Plans exist (e.g. Rotherwas Industrial Estate) it has been easier for SME’s to join in within a large Travel Plan framework.

Promotional Material – the Hereford Mini Map: A Success Story

The single most effective promotional tool produced by the Sustainable Transport team is the Hereford mini-map. Designed not to be ‘mode-specific’ nor give anti- car messages this resource acts as the ‘Trojan Horse’ for the travel behaviour team. 130,000 copes have been released of this document over the past 4 years (since 2005) and has become the ‘default’ map for getting around Hereford because it does not overtly favour a travel mode It should be noted that the map does not include parking locations but a special parking map is being produced at present.

Issued free to businesses, residents, libraries and other public locations, and also available in A4 handout and e-copy, feedback has been extremely positive and is often the first 'talking point’ enable other smarter choices interventions to be discussed with residents, employees, businesses and other customers. In contrast the ‘Big Cycle ‘Map only needed a print run of 4000 to last 2 years. This represents HCC's ‘core’ smarter choices product which they consider must be maintained into the future.

Web Promotion

HCC’s public website covers sustainable transport information and messages but tends to be spread around the website, and is ‘lower down’ in the navigation tree. This means that HCC's smarter travel messages are somewhat diluted, and consolidation of promotional resources and material will be helpful to maintain a strong brand identity.

Car Sharing

HCC has set up *Twoshare* which is a branded local authority carshare scheme supported by *Liftshare*. The *Twoshare* launch used posters, umbrellas, notepads etc, and publicity continues through bus backs and press coverage. It is also actively

promoted to a database of over 200 employers. HCC supports an ‘open access’ approach to car sharing rather than the use of restrict 'sub-clubs’ which limit the viability of such measures, particularly within a rural catchments.

The *Twoshare* site opened in June 2004 and now has 700 registered users including some car sharers from within HCC. Whilst this may appear low per capita (187,000 County population) this scheme is performing better than other Counties (e.g. Gloucestershire) and is particularly helpful in reducing longer distance trips over 45 minutes in length because of the personal cost benefits and acceptability of time penalties on journeys of this duration. Note that for Hereford, if the growth agenda is designed to ensure greater sustainability is created, and then the promotion and approach to car sharing may need to be considered differently and looked at on an urban scale.

Build Relationships with Businesses and Schools

A key reason for Herefordshire’s success in the smarter travel area has been the maintenance of sustained relationships, coupled with a greater brand and concept awareness. Whilst events are still held (Walk to School Week, Bike to School Week, Work to Work Week, National Liftshare Day and ad hoc ‘walking challenges’) these are labour intensive and therefore whilst HCC recognises these targeted promotions, the delivery strategy is based much more on longer term relationships and engagement rather than intensive ‘injection-based’ activity.

Cycling Training Initiatives

HCC has provided adult cycle training over the past 5 years and has now expanded its pool of trainers to 12, to enable an all-year programme to be offered to meet demand flexibly.

Child cycle training has traditionally been provided to all primary schools but has now been upgraded to deal with the new Bikeability standards.

Secondary schools have now been able to offer cycle training (since 2009) and will roll forward to December 2010.

Staff Resources

In order to maintain the level of awareness of smarter choices and to run the various initiatives, a robust level of staffing is a prerequisite to any successful smarter choices programme. This is particularly important if smarter travel is going to be a key pillar in preparing for major development projects in the city. Currently the number of staff working in the smarter choices area amounts to 10 of the 40 staff within the Transport Planning/Policy service, and demonstrates how HCC has flexible reallocated staff resources towards this key service area.

The construction of the team is as follows:

- Sustainable Transport Team Leader
- STP Coordinator
- School Cycle Training Coordinator
- Cycling Officer (Sustrans Connect 2)
- Promotions/Events/Travel Planning including Development Control comments on TPs) – 1 FTE
- Corporate Travel Plan Officer
- Rotherwas Employment Zonal TP Coordinator (½ FTE)
- Road Safety/Cycle Training/ETP - 3 FTEs
- Administration support – ½ FTE

In order to achieve sustained modal shift, the safeguarding of this type of level of staff input is also important.

HC Travel Plan

Leadership by example is considered to be an important part of HCC's forward strategy. Officers consider the corporate ownership of the Travel Plan as a key step forward in being able to demonstrate success to other key employers and to engage developers in formulating effective Travel Plans through the planning process.

Endorsement by the Senior Management Team is seen as a critical step forward, and also the use of the Travel Plan tool to help support the continued Council office consolidation process, potentially around the Plough Lane site. The 'off-centre' location of HCC's main offices will need to be managed effectively and therefore corporate support for the travel plan is both timely and forward-looking.

Leisure and Tourism

The Sustainable Transport team has fostered good links with HCC's Tourism function. Through the production of leisure cycling route maps and guides it is hoped that individuals will take up cycling as a 'taster' activity for leisure reasons, and then translate this into more regular cycling behaviour for utility purposes.

There is a sound understanding amongst officers of the importance of travel options to support lifestyle choices and for HCC to be proactive in meeting the needs of different sectors of the population.

Grants and Funding Support

There is a small seedcorn fund given by HCC to help local employers develop their local Travel Plans. These awards are up to £1000 in value and enable up to 100% public sector funding. Commitment to an effective Travel Plan is one of the prerequisites to be considered for the seedcorn funding.

Area Wide Travel Plans and Travel Plan Support

The Rotherwas Employment Area forms HCC's main zonal Travel Plan. Supported by a ½ FTE Travel Plan Coordinator, the further development of the site by Rotherwas Futures has resulted in a review of the existing Travel Plan, and strategic enhancement of the zonal plan. The combination of an on-site Travel Plan Coordinator and 'cornerstone' employers has meant that the conversion rate of smaller businesses to join the scheme has also improved.

A key challenge for HCC is resistance from these smaller enterprises in developing 'full-blown' Travel Plans and therefore HCC is favouring a simpler, easier format for these organisations to follow and/or participation in an area wide approach. HCC is also developing template Travel Plans to support the development process and provide a guidance pack and templates for organisations wishing to move forward with their own Travel Plans.

At present the aggregated effect of bring smaller businesses together is not being felt, particularly where travel plans are being looked at by individual companies remote from potential partner organisations. This is compounded by the planning process where occupiers have needed to bring forward their own individual Travel Plan as part of a small employment zone, whereas the true benefits would be realised if resources could be shared across all occupiers (i.e. a single pool car across 10 SME's, shared covered cycle parking to serve a small B1 office development).

Personalised Travel Planning

Whilst accepted as a legitimate tool, PTP is considered a relatively expensive method of achieving mode change per capital, for that reason HCC's focus has been on embedding their existing portfolio of products, particularly the Hereford Mini Map.

Developer Travel Plans and Travel Planning

This represents the biggest challenge for HCC in terms of securing effective Travel Plans through the planning process. There is currently a moratorium in requiring developers to sign up to Section 106 agreements on the grounds of economic development and inward investment. Traditionally HCC has only secured Travel Plans by condition (with its associated limitations on performance and outcomes) and has not used the Section 106 routeway to date.

Officers are currently examining best practice in terms of Section 106 and Supplementary Planning Documents (e.g. Liverpool City Council, East Sussex County Council, Surrey County Council, and TfL etc) and the potential for creating Herefordshire's equivalent. Given the April 2009 Travel Plans and the Planning Process Guidance it is particularly important that emphasis is given to this tool within the LDF process, particularly for residential growth schemes.

In order to support lifestyle changes associated with new residential development. Officers consider that the marketing and promotion around smarter choices should

be embedded within wider ‘lifestyle’ promotional activities, such as recycling, energy efficiency etc. and that HCC should offer this ‘joined up’ approach as part of targeting new developments.

Risks and Challenges

In terms of the threats to delivery of an effective smarter choices strategy in Hereford, following risks were identified:

- National fuel prices come down and make motoring more attractive
- Employment locations still promote jobs in locations where the required labour skilled labour do not live
- Lack of strong planning policy/SPD on smarter travel weakens the ability to secure good quality Travel Plans
- Continued traffic increases on the A49, mainly from local traffic using this as the main river crossing. Smarter choices has the potential to abstract /influence a sizable proportion of the ‘bottleneck’ traffic but relies on public transport rerouting, park and ride and other ‘filter’ points on the network which currently do not exist

Appendix 8: Summary of challenges