

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
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p> <p>A Local Development Framework Core Strategy has been published and key policies have been taken into account in this study</p>	<p>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.</p> <p>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.</p> <p>Hereford's Core Strategy will be ssubmitted later this year.</p>

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

Telford	Shrewsbury	Hereford
<p><i>To use growth to re-shape the urban form, to encourage more sustainable travel and avoid further reinforcing its car-based culture.</i></p>	<p><i>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.</i></p>	<p><i>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</i></p>

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

Cycling

Telford	Shrewsbury	Hereford
<p>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.</p>		
<p><i>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.</i></p>	<p><i>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.</i></p>	

Walking

Telford	Shrewsbury	Hereford
<p>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.</p>	<p>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.</p>	
<p><i>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.</i></p>	<p><i>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.</i></p>	
<p>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.</p>		
<p><i>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.</i></p>		

Public Transport

Telford	Shrewsbury	Hereford
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.	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).	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.
<i>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.</i>		
Telford's free-running road network means buses are less affected by congestion.	In Shrewsbury and Hereford, there are very limited opportunities for further physical bus priority.	
	<i>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.</i>	
	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.	
		<i>A challenge for Hereford is to address the needs of people travelling to the city for work, recreation and shopping.</i>
<i>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.</i>		

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
<p>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 be 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.</p>	<p>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.</p>	<p>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.</p>

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

Telford	Shrewsbury	Hereford
<p>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.</p>	<p>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</p>	<p>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.</p>

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.