

Delivering a Sustainable Transport System in the West Midlands

West Midlands Regional Work Programme

June 2009

Contents

Section	Page
1. Introduction	1
Background	1
Format of this submission	1
Contact details	1
The DaSTS Process in the West Midlands	2
Key Issues for the West Midlands	4
2. Regional Strategic Priorities	7
Introduction	7
Identification of regional transport challenges	7
Review of the Evidence	10
Identification of the Regional Priorities for Study	12
3. National Strategic Priorities	15
Introduction	15
Strategic National Corridors and the West Midlands	15
Studies of interest to the West Midlands	15
Commitment from the West Midlands to supporting DfT in its national studies	16
4. Work Programme and Funding Priorities	17
Introduction	17
Priority themes and Design of studies	17
Study 1: Reducing the demand for travel and changing travel behaviour	18
Study 2: Access to Birmingham	19
Study 3: Improving Connectivity in the Coventry North – South Corridor	20
Study 4: Improving Connectivity to and within North Staffordshire	21
National studies	21
Cross-cutting activity in the region	22
The overall work programme and our funding priorities	23
Headroom	23
5. Programme Management	25
Introduction	25
Staff Resources	25
Governance	25
Draft Programme of Work	27
Risk Management	27

List of Tables

Table 1.1 – West Midlands Contact Details	2
Table 2.1 – The travel challenges for the West Midlands	9
Table 2.2 – Rationalised priorities for study by the region	13
Table 4.1 – The Proposed West Midlands Work Programme	24
Table A.1 – Mapping of strategic outcomes under the five national DaSTS goals	30
Table A.2 – Mapping of strategic outcomes under the three West Midlands strategic priorities	32

Table A.3 – Development of an initial set of travel challenges for the West Midlands	34
Table B.1 - Sources of evidence	37
Table C.1 – Review of strength of current evidence	41
Table C.2 – Review of evidence to identify priorities for study	43
Table C.3 – Geographic priorities and interface with national studies	45

List of Figures

Figure 1.1 – The DaSTS Process	3
Figure 5.1 – Governance Model for the West Midlands	26
Figure 5.2 – West Midlands Programme of Work	28

Appendices

Appendix A – Analysis of Strategic Fit	29
Appendix B – List of evidence sources	36
Appendix C – Review of evidence	40

1. Introduction

Background

- 1.1 We welcome the Department for Transport's (DfT) invitation to set out our strategic priorities against the goals and challenges identified in Delivering a Sustainable Transport System (DaSTS), and to develop a work programme that identifies a package of interventions to meet the goals and challenges. The identification of our regional priorities and the development of the work programme is the first stage of the DfT's four-stage process for DaSTS.
- 1.2 The West Midlands shadow Joint Strategy and Investment Board (JSIB) has developed the region's submission for DaSTS. In the West Midlands, we have substantially developed our thinking during the last year with the development of a Regional Transport Priorities Action Plan (RTPAP). The RTPAP has been shaped by the Regional Spatial and Economic Strategies (RSS and WMES) and was framed around the five DaSTS goals. It also played a significant role in the development of our Round 2 Regional Funding Advice.
- 1.3 Atkins and David Pywell were commissioned to assist and facilitate this process, including the development of our regional goals and challenges, review of the evidence in relation to the issues, using this evidence to identify our priority challenges and the development of a regional work programme that addresses these challenges.

Format of this submission

- 1.4 This document sets out the submission from the West Midlands, which is structured as follows:
- The remainder of this chapter sets out the **contact details** for the region and highlights the key issues for the region;
 - Chapter 2 describes the process of developing our **regional strategic priorities**;
 - Chapter 3 describes our perspective on DfT's priorities for the **strategic national corridors**;
 - Chapter 4 describes the process of developing our proposed **work programme**, with a clear link between our strategic priorities, the proposed work and the outputs to be delivered, together with our perspective on financial **headroom**; and
 - Chapter 5 finally sets out our approach to the **management of the DaSTS work programme** in the West Midlands, including developing our capacity in leading this work, governance processes to ensure effective progression of the work, and appropriate systems for the management of risk.

Contact details

- 1.5 The contact details for our DaSTS submission are provided overleaf.

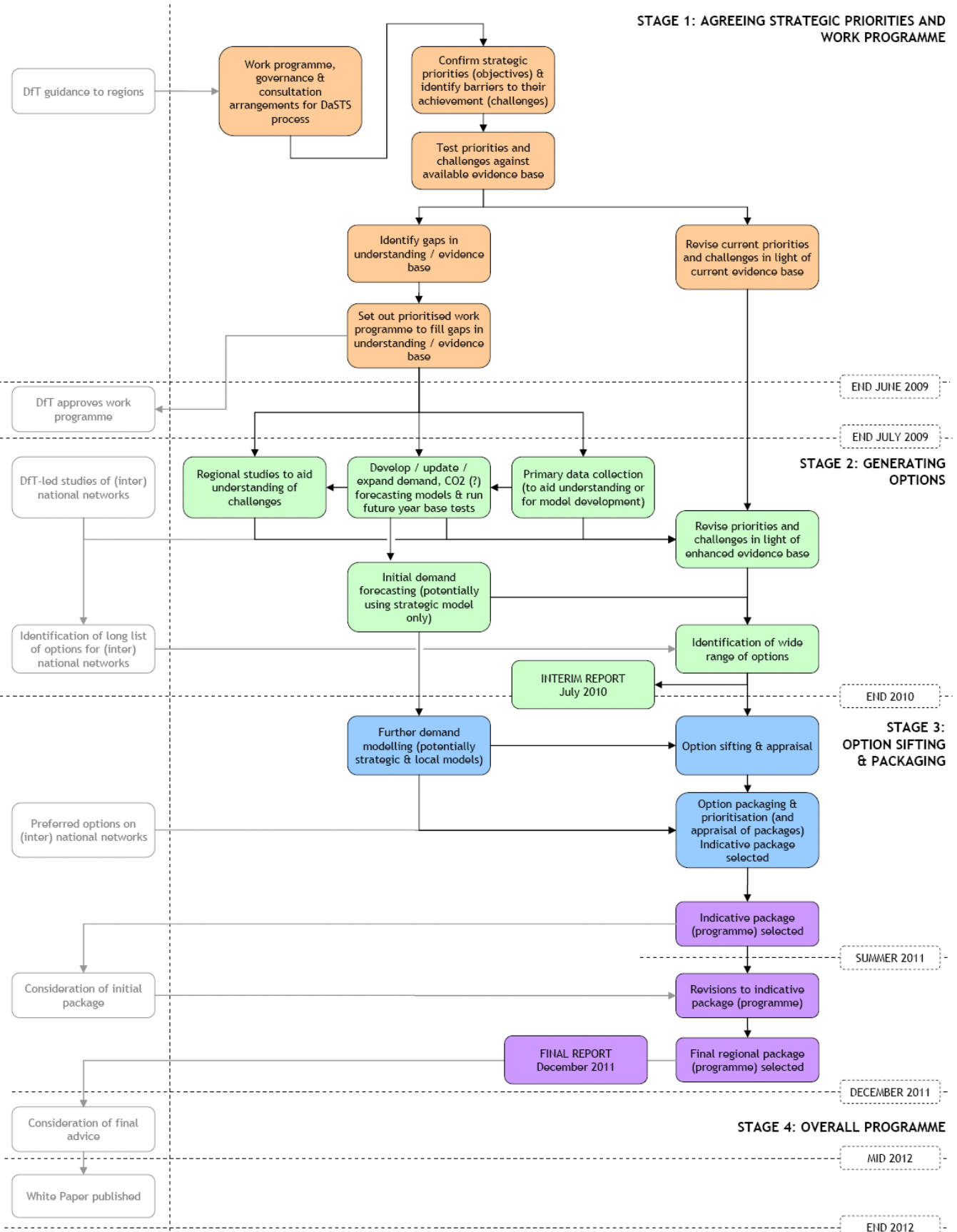
Table 1.1 – West Midlands Contact Details

Region	West Midlands
Contact name	Mark Pearce
Contact address	Advantage West Midlands 3 Priestley Wharf Holt Street Birmingham, B7 4BN
Contact phone number	0121 503 3267
Contact email address	markpearce@advantagewm.co.uk

The DaSTS Process in the West Midlands

- 1.6 Our DaSTS work programme has been designed to help us to identify the challenges for the region and by improving the evidence base enable us to identify a series of interventions on the transport network. However, our work has also been designed to identify the opportunities to deliver better economic, social and environmental outcomes through spatial planning and new models of service delivery.
- 1.7 In the meantime, it will be necessary to undertake substantial work in the region to develop packages of transport interventions that work towards the five DaSTS goals, in particular understanding how to support sustainable economic growth, tackle carbon emissions and support the renaissance of our urban and rural areas.
- 1.8 Following the submission of this work programme (Stage 1 in the process), Stage 2 will require the generation of potential options for transport interventions. We intend to produce an Interim Report by March 2010. Stage 3 will then require the sifting and packaging of options, with development of the regional programme by December 2011. The DfT, however, has made clear that funding will only be available until March 2011. It is evident that a substantial amount of work needs to be completed by the region in the next 18-21 months, and Figure 1.1 illustrates the tasks that will be required.

Figure 1.1 – The DaSTS Process



Key Issues for the West Midlands

Context

- 1.9 The West Midlands region is home to some 5.4 million people. Half a century ago the region was one of the most prosperous in the country, experiencing growth in population, output and employment. However, economic restructuring, market liberalisation and increasing globalisation have all impacted upon the region's economy. People have also moved away from the major urban areas. This has implications for both urban and rural areas and is being tackled through the RSS.
- 1.10 The West Midlands sits at the hub of the national transport network and accommodates a significant proportion of vital 'passing through' and interchange trips. The inter-relationships and inter-dependencies between the National and City & Regional Networks in the West Midlands present additional challenges.
- 1.11 Some urban neighbourhoods have suffered from increased social exclusion and deprivation, damaged and degraded environments, lack of adequate housing and in some areas a collapse of the local housing market. Ensuring that areas remain attractive for residents and investors will continue to be a challenge.
- 1.12 Similarly in rural areas, we must ensure that increased housing and inward migration and changing demographic profiles do not lead to areas with decreased economic activity and pockets of deprivation.
- 1.13 In 2005 on the broad measure of prosperity (Gross Value Added - GVA) the West Midlands output per head was 89% of the UK average. This equates to a £10 billion output gap – the region would be £10 billion richer if our output per head was at the national average. Recent trends show that this situation has continued to worsen.
- 1.14 In recent years, more people were living increasingly further from their work and the services and amenities that they use, meaning that they travel further and more often, although the commuting trend has recently reversed and these more sustainable commuting patterns need to be maintained. Evidence shows that travelling further and more often increases congestion and CO₂ emissions. In addition to travel to work patterns leisure activity has also grown as a significant component of the economy, with consequent increases in the demand for travel.
- 1.15 There is a need for additional homes, particularly affordable homes. The exact number and location is still being debated in the revision of the RSS. Whatever the outcome there will be a continuing growth in demand for transport that will place further strain on the ability of existing infrastructure to cope. It will also present a challenge in achieving our shared climate change ambitions.

Background

- 1.16 These challenges require a multi-faceted response and cannot be met by transport interventions alone. This submission has a particular focus on the Major Urban Areas and promoting behavioural change across the region. There are however particular challenges, such as the rural prosperity gap, which require consideration of a particular range of factors to address wealth inequalities in employment, the provision of affordable housing and entrepreneurial activity.
- 1.17 Our proposal for extending the role of 'smarter choices', through reducing the demand for travel and changing travel behaviour, should benefit many areas across the region. However the evidence demonstrates that the objectives of DaSTS and the region will, in the main, be met by concentrating on the urban areas comprising the Birmingham travel to work area, the Black Country, the North Staffordshire conurbation and Coventry North-South corridor. Future policy decisions about the locations of additional housing and employment provision (e.g. in the

Settlements of Significant Development or Impact Investment Locations) will also be of great significance in influencing the region's ability to deliver a sustainable transport system.

1.18 In producing the Regional Funding Advice (RFA) to Government earlier this year the West Midlands shadow Joint Strategy and Investment Board (JSIB) adopted the following strategic priorities to close the region's output gap by:

- 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.

1.19 The West Midlands' RFA process concentrates on delivery and identified twenty Impact Investment Locations where early delivery of aspects of the key regional strategies can be achieved. The region's ambitions are set out in full in the principal strategies: the West Midlands Regional Spatial Strategy (RSS), West Midlands Economic Strategy (WMES), Regional Housing Strategy and Regional Transport Priorities Action Plan (RTPAP). In framing our response to DaSTS we have assumed that the programme of transport investment identified in the RTPAP will be delivered as set out in the RFA to Government.

Our Proposals

1.20 In developing the region's response to DaSTS we have looked at the contribution that transport will make both to supporting and acting as a stimulus in meeting these strategic priorities, as well as to meeting the primary objectives of DaSTS. With resources certain to be more limited in the future, we know that we cannot expect to build our way out of these problems and we will have to make difficult choices.

1.21 We have outlined below those national studies suggested by the DfT in which the West Midlands has a significant interest. Our priority is Access to Birmingham, but the Corridor Routeing Study should include options to make better use of the M6 Toll as an existing resource and link to the potential High Speed 2 railway (HS2):

- **Access to Birmingham** – we would look to this being a fully integrated programme of work. Our own analysis has highlighted the importance of improved connectivity to Birmingham and the adjacent urban areas of the Black Country and Solihull. We therefore propose that this be a jointly supported piece of work with joint governance arrangements between DfT and ourselves;
- **Corridor Routeing Study** – we understand that this is expected to focus on the relationship between A1 and M1, and whilst the region has an interest in this, we feel that more could be achieved if the M6 corridor is included, the study is mode-neutral and related work undertaken by HS2 is taken into account. In particular the M6 Toll is an underutilised resource which should be exploited. The level to which we expect to see the region engaged could therefore be determined with more certainty once the final scope is settled;
- **Freight from Road to Rail** – we would look to build on our existing work following identification of this as an important area at both a national and regional level in our RFA;
- **Access to Heathrow** – we believe that regional surface access to Heathrow Airport could be addressed in the Access to Birmingham joint study;
- **Influencing Travel Behaviour (ITB) and Integrated Demand Management (IDM)** – this links to our own proposal on reducing the need to travel and changing travel behaviour;
- **HGV Accidents** – we have an interest in the findings where there are significant local implications.

- 1.22 The West Midlands would welcome the opportunity to work together with the DfT, adjacent regions and other partners to align the outcomes of a number of pieces of work. We expect that some work, such as 'smarter choices' will be of a generic nature and will be transferable between regions as well as highlighting specific local/regional programmes of work. We would also expect other regions to see mutual benefit in certain of these studies.
- 1.23 We have some of the answers. The studies that we are proposing will build upon the existing evidence base. The studies and other work allied to the outcome of the current Examination in Public into the RSS will also be used to further inform a genuine debate about the specific location of housing and employment sites which could deliver economic and social outcomes as a broader contribution to DaSTS. Whilst it is evident that much of the proposed DaSTS work programme would focus on the major urban areas within the region, the other areas figure significantly in the RFA and specific issues as well as linkages to other parts of the region (and in particular the gateways) remain of critical importance. These issues will be considered in scenario tests in the work programme.
- 1.24 To help achieve these aims we have carefully assessed what further work we believe should be undertaken at a regional level and have narrowed this down to four specific studies for detailed scoping, namely:
- Reducing the demand for travel and changing travel behaviour;
 - Access to Birmingham (focussing on Birmingham, Black Country and Solihull. See our commentary on the national studies above);
 - Improving Connectivity in the Coventry North / South Corridor; and
 - Improving Connectivity to and within North Staffordshire.
- 1.25 Each of these proposed study areas is outlined in more detail in Chapter 4, together with our assessment of how they contribute to the wider objectives of DaSTS and an assessment of resources and risk.
- 1.26 We would also expect to explore with Government the way in which policies such as economic investment, planning policy and transport interact with each other to help achieve objectives common to all. For example the way in which investment in housing or jobs is focused on existing urban areas can reduce the need to travel, support additional infrastructure, reduce CO₂ emissions and potentially improve community cohesion by discouraging further physical severance of existing built up areas. Demand can be managed in a range of ways including careful use of spatial planning and through existing tools, such as parking policy, to encourage travel in a more sustainable way.
- 1.27 Investment in infrastructure such as high speed broadband could also provide a means to help bridge the time it will take for settlement patterns to change. We encourage and support lateral thinking by Government, across Departments to reduce the need to travel as a contribution to DaSTS and the West Midland Region's objectives. Issues confronting isolated rural communities are not unique to the West Midlands, and attempting to solve the 'transport question' in isolation is not the way to confront these issues. It would seem potentially useful for several regions to join with the relevant Government departments, including the DfT to examine these wider challenges.
- 1.28 Providing the means to begin to reverse trends such as these is a long term objective, needing coordinated policy making and implementation to influence the way in which the market behaves. As a region we therefore welcome the opportunity to work with Government (and other partners) to achieve our mutual goals.

2. Regional Strategic Priorities

Introduction

- 2.1 This chapter describes the process of identifying the West Midlands' regional strategic priorities, based upon the DaSTS matrix of goals and challenges and our own regional priorities. It is founded upon the wider context for West Midlands, including our key economic, environmental and social challenges, and the role of transport in addressing these wider goals as set out in the introduction.
- 2.2 It continues, in providing the evidence to illustrate the scale of the challenge faced in relation to each of the challenges, and uses this to identify the priority challenges to be addressed at the regional level.

Identification of regional transport challenges

- 2.3 The West Midlands welcomes the approach taken by the DfT in setting out the five national goals in DaSTS:
- 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; and
 - To **improve quality of life** for transport users and non-transport users, and to promote a **healthy natural environment**.
- 2.4 The West Midlands has undertaken a comprehensive analysis of its current framework of strategies and developed a transparent approach to identifying its regional strategic priorities in a number of steps as described below.

Step 1: Policy fit of regional strategies to five national DaSTS goals

- 2.5 The starting point for our work has been the DaSTS's matrix of goals and challenges, which describes a series of specific challenges that need to be addressed in working towards the five national goals. At the same time, we have undertaken a comprehensive analysis of key regional strategy documents, to identify the fit with the five national goals. These documents include the:
- West Midlands Regional Spatial Strategy (which includes the Regional Transport Strategy);
 - West Midlands Economic Strategy;
 - Regional Housing Strategy;
 - Climate Change Action Plan;
 - Regional Transport Priorities Action Plan; and
 - Regional Funding Advice (Round 2).

- 2.6 From these documents, we have identified a series of high-level regional objectives, and a set of related travel outcomes, within the framework of the five national goals. This analysis is presented in Table A.1 in Appendix A.
- 2.7 This clearly shows the region's strategy framework is strongly aligned with DaSTS and provides a sound foundation for the development of a DaSTS work programme in the region.

Step 2: Policy fit against the three regional priorities

- 2.8 As highlighted in Chapter 1, the region has identified its overarching regional priorities in its second round of Regional Funding Advice, which are to close the region's output gap by:
- Sustaining and strengthening the West Midlands' economy;
 - Delivering urban and rural renaissance, including housing growth and the provision of affordable homes; and
 - Expanding skills and employment.
- 2.9 We have examined the policy fit of the high-level regional objectives within the framework of these three regional priorities, which is presented in Table A.2 in Appendix A. This also presents the set of rationalised travel outcomes that will support the delivery of the high-level regional outcomes.
- 2.10 Unsurprisingly, there is strong alignment between the first priority, sustaining and strengthening the regional economy and the DaSTS goal to support economic growth. The region also recognises the crucial importance of delivering significant reductions in greenhouse gases, and this issue is explicitly captured under this priority. The second priority, delivering urban and rural renaissance, maps against all five DaSTS goals: with a particularly strong emphasis on improved quality of life. The third priority, expanding skills and employment, maps most strongly against the equality of opportunity goal.
- 2.11 We can therefore be confident that the work undertaken to date, which has been developed in the context of these three regional priorities, is supportive of the approach proposed by DaSTS.

Step 3: Development of the regional travel challenges

- 2.12 We have then moved from the set of desired travel outcomes to a series of specific, tangible travel challenges that must be addressed by the region in order to achieve those outcomes. This process is described in Table A.3 in Appendix A. Once again, this demonstrates a good strategic fit against the five DaSTS goals.
- 2.13 It also demonstrates that certain travel challenges (WM4, WM8 and WM11, see Table 2.1 overleaf for details) appear more than once in the table. WM4 appears more than once because it will be necessary to address the demand for travel generated by both new employment and housing. WM8 appears more than once because sustainable modes can both play a role in a low-carbon transport system and in helping to improve health outcomes. WM11 appears more than once because improved public transport is needed to improve access to services, employment and education and training.
- 2.14 Table 2.1 presents a set of rationalised travel challenges for the region. These challenges show a strong alignment with the five DaSTS goals, although it is clear that there is a particularly strong emphasis on supporting economic growth, reducing emissions of CO₂ and other greenhouse gases, and improving quality of life.

Table 2.1 – The travel challenges for the West Midlands

Travel Challenges	DaSTS goals				
	Economic growth	CO2 emissions	Safety, security, health	Equality of opportunity	Quality of Life & environment
Addressing the impacts of road congestion, particularly on freight and business travel (WM1) .	✓				
Improving the ability of the rail network to meet the needs of travellers and freight movements (WM2) .	✓	✓			
Improving the ability of the public transport network (rail, bus, Metro) to cater for travel, especially to work (WM3) .	✓	✓		✓	
Addressing the demand for travel resulting from new development, both employment and housing (WM4) .	✓	✓			✓
Overcoming the gaps in capacity and quality of the strategic transport gateways and corridors to/from Birmingham (WM5) .	✓				✓
Identifying the causes of, and planning for, non-recurrent delays on the transport networks (WM6) .	✓				✓
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) .		✓	✓	✓	✓
Reducing traffic (especially HGVs) and/or mitigating its effects, in sensitive areas (WM9) .	✓		✓	✓	✓
Minimising the impacts of new transport infrastructure and travel on the natural environment (WM10) .					✓
Improving public and community transport accessibility and affordability in urban and rural areas (WM11) .	✓			✓	✓
Identifying measures to reduce further the number of deaths and injury accidents on roads (WM12) .			✓		

Review of the Evidence

- 2.15 A comprehensive review of the evidence has taken place, which has been used in understanding the current and future challenges faced in the region. A list of the evidence used in this review is provided in Appendix B. The region has worked together to identify and share evidence, ensuring a shared understanding of the issues that are faced.
- 2.16 The review of the evidence has helped to frame the twelve travel challenges for the region, although we have kept sight of other potential issues that may not have been explicitly captured by these challenges.
- 2.17 The key findings of the review are summarised in the following sections relating to each DaSTS goal.

Transport and the West Midlands Economy

- 2.18 The West Midlands economy is underperforming. In 2005 the West Midlands output per head was 89% of the UK average, equivalent to a £10bn output gap. Recent trends show that this situation has continued to worsen. The region has a strong understanding of the drivers of this output gap. Whilst 20% of this gap is due to economic activity, 80% is due to the sector structure of the region, including transport and business productivity.
- 2.19 We have a strong understanding of the mechanisms through which problems on the transport network are holding back the potential of the West Midlands economy. Extensive work has taken place through the development of the Regional Transport Priorities Action Plan (RTPAP), preparation of the second round of our RFA and through the previous Transport Innovation Fund (TIF) investigation work.
- 2.20 Better connectivity by public transport is important in enabling business journeys to take place and in maximising the depth of the West Midlands labour markets. Better connectivity is also crucial to develop the gateway role of Birmingham as a major European and World City, with Birmingham International Airport as a major international gateway and Birmingham New Street station acting as a gateway to and from the whole region. At the same time, the region faces challenges with the efficient movement of freight, with the opportunity to enable a shift from road to rail and reduce haulage costs.
- 2.21 The region also recognises the enormous challenge of congestion and reliability of journeys, particularly in the Major Urban Areas, with resultant increased costs to business. This will become progressively more challenging as the region looks to address the demand for travel generated by more houses and jobs in the region, and there is a risk that congestion stalls regeneration.
- 2.22 The mechanisms through which transport can constrain (and on the other hand, unlock) economic growth are described under travel challenges WM1 to WM6. The sources used to provide evidence under these six challenges are provided in Appendix B.

Transport and Carbon Emissions in the West Midlands

- 2.23 The region recognises that it is crucial to tackle its carbon emissions and that transport is currently a major contributor. Whilst total carbon emissions are highest in the more urban parts of the region and on the motorway corridors: the carbon emissions per capita are higher in the rural areas. The region recognises that it is crucial to both reduce the need to travel and encourage a shift to lower-carbon forms of travel, including walking, cycling and public transport.
- 2.24 The mechanisms through which transport can support the move towards a lower carbon economy are articulated in travel challenges WM2, WM3, WM4, WM7 and WM8. The sources used to provide evidence under these five challenges are provided in Appendix B.

Safety, Security and Health in the West Midlands

- 2.25 The region has made significant strides in improving safety on its road network. The Killed and Seriously Injured (KSI) accident rate is lower than the national average in much of the region, although it is higher than average in Herefordshire and parts of the Metropolitan Area. Most of the region has delivered substantial reductions in casualties during the last decade.
- 2.26 Poor air quality adversely affects the health of people living in the local area affected. There are concentrations of poor air quality in the region due to heavy traffic flows, with Air Quality Management Areas having been declared. These include the Major Urban Areas, other smaller towns and cities and air quality hotspots on the main road network. There is also evidence that there is scope for more active travel in the region, encouraging people into more healthy lifestyles through walking and cycling.
- 2.27 The mechanisms through which transport can impact on the safety, security and health of both travellers and local communities are articulated in travel challenges WM8, WM9 and WM12. The sources used to provide evidence under these three challenges are provided in Appendix B.

Equality of Opportunity in the West Midlands

- 2.28 The West Midlands has wide variations in life opportunities, both amongst different groups of people and between different areas. There are significant variations in output per head (and hence prosperity) between different parts of the region, with Solihull being above the national average, and Stoke-on-Trent, Shropshire and Herefordshire significantly below. Whilst a large part of these differences in prosperity are due to industry structures, it is evident that poor economic performance is related to concentrations of deprivation. Concentrated problems of deprivation are experienced in parts of Birmingham, the Black Country and North Staffordshire, whilst complex issues are also experienced in the more peripheral rural areas in the west.
- 2.29 The causes of deprivation are complex, and relate to education, skills and health amongst other factors. Deprivation problems can be exacerbated by poor accessibility to jobs, training and healthcare, which is a particular challenge for people without access to a car. The local transport authorities have undertaken detailed work to understand the issues faced, and have developed accessibility plans in response to the challenge.
- 2.30 The mechanism through which transport can impact on equality of opportunity is primarily articulated in travel challenge WM11, but also in WM3, WM8 and WM9. The sources used to provide evidence under these four challenges are provided in Appendix B.

Quality of Life in the West Midlands

- 2.31 Improving quality of life is a major priority for the region, in both urban and rural areas. In the rural areas, the challenges include the availability and affordability of housing and accessibility to jobs and services, at the same time as protecting the natural environment. In the urban areas, there are challenges in delivering regeneration, particularly in the Black Country and North Staffordshire, and in creating an 'urban offer' that can be attractive to both residents and businesses.
- 2.32 The transport network can act as a particular barrier to improving quality of life in urban areas, both directly through community severance, traffic noise and poor air quality, and indirectly through regeneration being stalled. In general, the heaviest traffic flows are experienced in the urban areas of the region, with high levels of noise and hotspots of poor air quality. The rural areas generally suffer less noise, although this is a challenge on the major road corridors through the region.
- 2.33 The mechanisms through which transport can impact on quality of life in the region are articulated in a number of our travel challenges, but primarily WM9 and WM10. The sources used to provide evidence under these challenges are provided in Appendix B.

Step 4: Review of the strength of evidence for the travel challenges

- 2.34 The next step was to review the strength of evidence for each of the twelve travel challenges. A summary of this review is presented in Table C.1 in Appendix C. This demonstrates that the evidence is strong for certain travel challenges, and less strong for others. This will be important in shaping the priorities for the planned regional work programme.

Identification of the Regional Priorities for Study

- 2.35 The West Midlands has developed its priorities for the DaSTS work programme on the basis of the twelve travel challenges and the evidence that has been reviewed.

Step 5: Review of the evidence to identify regional priorities

- 2.36 The evidence base was a factor identifying the importance of each of the twelve challenges to the region. This is summarised in Table C.2 in Appendix C.
- 2.37 Table C.2 summarises the quality of the existing evidence base, the significance of the issue to the region and the scale of the issue. These factors have directed the identification of the priorities for study. In the case of certain travel challenges, it is considered that the issues are best addressed at the local level, for example tackling road safety problems and improving accessibility to local services. The priorities for study by the region are focused on those challenges that are truly regional in nature and those for which we have gaps in our understanding and/or ways of tackling the challenge. These include managing travel demand, delivering a step-change in public transport connectivity and tackling the causes of congestion.
- 2.38 Table C.3 identifies the scales of the challenges in the different parts of the region, using the evidence base, and the priorities for future study. This demonstrates that there are multiple challenges that need to be addressed in certain parts of the region, which will shape the future DaSTS work programme. The areas of the region requiring greatest attention in the work programme include Birmingham and Solihull, the Black Country, North Staffordshire and Coventry and parts of Warwickshire.
- 2.39 Table C.3 also presents the alignment of our regional priorities with DfT's national studies, which are discussed further in Chapter 3.

Step 6: Taking stock to identify the key themes for study in the region

- 2.40 We have then taken stock from these findings to identify three headline themes that will be priorities for study in the West Midlands, i.e.:
- Priority Theme 1: More sustainable communities across the West Midlands;
 - Priority Theme 2: Better travel choices supporting a stronger, lower carbon economy; and
 - Priority Theme 3: More efficient and reliable journeys in urban areas and connecting the region.
- 2.41 The travel challenges represented by each theme are shown in Table 2.2 overleaf.
- 2.42 This demonstrates the opportunity to undertake region-wide work under the theme of 'more sustainable communities' to understand the scope to reduce the need to travel across the region, address the demand for travel from new development and tackle the barriers to the use of sustainable travel modes.
- 2.43 Under the themes of 'better travel choices' and 'more efficient and reliable journeys', there is a greater focus on the Major Urban Areas, including Birmingham and Solihull, the Black Country, North Staffordshire, Coventry and parts of Warwickshire.
- 2.44 These key themes are addressed in the proposed regional work programme, which is described in Chapter 4 of this submission.

Table 2.2 – Rationalised priorities for study by the region

Travel Challenges	DaSTS goals					Reg. priorities		Priorities for study in sub-regions						Priorities for consideration through national studies								
	Economy	Climate change	Safety and health	Equality	Quality of Life & env't	Quality of existing evidence	Priority for study at regional level	B'ham & Solihull	Cov. & Warks.	Black Country	Staffs + Stoke	Shrops + Telford	Herefordshire	Worcestershire	Access to B'ham	London to North	HGV accidents	Freight use of rail ntwk	Int demand Manage't	Smarter Choices	Access to Manchester	Access to Heathrow
Priority theme 1 – more sustainable communities across the West Midlands																						
Addressing the demand for travel resulting from new development, both employment and housing (WM4).	✓	✓			✓	OK	High															
Reducing the need for travel (WM7). (Study work for WM7 to be combined with WM4 to identify the role of spatial planning to reduce the need to travel).		✓			✓	OK	High															
Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8).		✓	✓	✓	✓	OK	High															
Priority theme 2 – better travel choices supporting a stronger, lower carbon economy																						
Improving the ability of the public transport network (rail, bus, Metro) to cater for travel, especially to work (WM3).	✓	✓		✓		Good	High															
Improving the ability of the rail network to meet the needs of travellers and freight movements (WM2). (Study work to form part of WM3).	✓	✓				Mixed	Med															
Overcoming the gaps in capacity and quality of the strategic transport gateways and corridors to/from Birmingham (WM5). (Study work for B'ham to form a distinct package)	✓				✓	Mixed	High															
Priority theme 3 – more efficient and reliable journeys in urban areas and connecting the region																						
Addressing the impacts of road congestion, particularly on freight and business travel (WM1).	✓					Good	High															
Identifying the causes of, and planning for, non-recurrent delays on the transport networks (WM6). (Study work on the road network to form part of WM1.)	✓				✓	Mixed	Med															

Travel Challenges	DaSTS goals					Reg. priorities		Priorities for study in sub-regions						Priorities for consideration through national studies								
	Economy	Climate change	Safety and health	Equality	Quality of Life & env't	Quality of existing evidence	Priority for study at regional level	B'ham & Solihull	Cov. & Warks.	Black Country	Staffs + Stoke	Shrops + Telford	Herefordshire	Worcestershire	Access to B'ham	London to North	HGV accidents	Freight use of rail ntwk	Int demand Manage't	Smarter Choices	Access to Manchester	Access to Heathrow
<p>Throughout this matrix, Red signifies high priority for study Amber signifies medium priority for study Green signifies low priority for study.</p> <p>Highlighted blocks in the matrix show links between regional priorities and planned national studies.</p>																						
Challenges that are not priority drivers in the region, but which will be taken into account during study work.																						
Reducing traffic (especially HGVs) and/or mitigating its effects, in sensitive areas (WM9).	✓		✓	✓	✓		Good	Low														
Minimising the impacts of new transport infrastructure and travel on the natural environment (WM10).					✓		Good	Low														
Improving public and community transport accessibility and affordability in urban and rural areas (WM11).	✓			✓	✓		Mixed	Low														
Identifying measures to reduce further the number of deaths and injury accidents on roads (WM12).			✓				Good	Low														

3. National Strategic Priorities

Introduction

- 3.1 This chapter describes the extent to which the proposed priorities for study work on the National Networks are consistent with the views that we have reached in Chapter 2.

Strategic National Corridors and the West Midlands

- 3.2 The West Midlands is at the heart of the national transport network, being at the intersection of two Strategic National Corridors: London to the North West and Scotland, and Bristol to the East Midlands. The former comprises the West Coast Mainline and M40 and M6 motorways, whilst the latter comprises Cross Country train services and M5 and M42 motorways.
- 3.3 In addition, the region is dependent on two further National Corridors: the South Coast Ports to the Midlands (including the A34, joining to the M40 just south of the region, and rail links to Southampton) and the Haven Ports to the Midlands (the A14, just outside the region, and the rail freight corridor between Felixstowe and Nuneaton).
- 3.4 Birmingham itself is a national strategic destination, whilst Birmingham International Airport is an important international gateway to and from the region. The West Midlands Metropolitan Area is at the crossroads of the two Strategic National Corridors, and is characterised by high levels of interaction between long distance and local travel. The rail network is heavily used by both long-distance and local rail services, with significant capacity constraints to cater for demand. Meanwhile, there are high numbers of local trips using the strategic Birmingham motorway box.
- 3.5 The central part of the region is therefore characterised by high levels of interaction between the national and city & regional networks. The West Midlands region is keen to work with DfT to develop a clear understanding of the current and potential roles of the different networks, to effectively meet the needs of different users and deliver efficient end-to-end journeys.

Studies of interest to the West Midlands

- 3.6 We have carefully considered the studies on the national networks that have been proposed by the DfT. The studies of interest and relevance to the West Midlands are considered to be:
- Access to Birmingham (including Birmingham, Solihull and the Black Country, which are crucial to the economic performance of our region);
 - Corridor Routeing Study (particularly in the context of north-south movements on the M6);
 - Freight from Road to Rail (given the high numbers of goods vehicles using the region's strategic corridors);
 - Influencing Travel Behaviour (which is complementary to our own proposals to examine the scope to reduce the need to travel and change behaviour);
 - Integrated Demand Management (given the high levels of interaction between the national and city & regional road networks, and the need to deliver more efficient end-to-end journeys);
 - HGV accidents (given the apparent hotspots on the network in our area and the impacts on network resilience);
 - Access to Heathrow (given the importance of Heathrow as the primary international gateway to the UK economy); and
 - Access to Manchester (given the functional relationships between the north of the region and the Manchester City Region and reliance on Manchester Airport).

- 3.7 We have considered how these proposed studies on the national networks map against our own travel challenges, and this analysis is presented in Table C.3. This demonstrates that we would have a particular interest in the outcomes of national work on Freight from Road to Rail, Influencing Travel Behaviour and Integrated Demand Management, together with the specific geographical studies relating to Access to Birmingham and the Corridor Routeing Study.
- 3.8 Following discussions with the DfT national networks team, we have considered further the extent to which we would wish to engage with and influence the national studies. We recognise that certain national work programmes are intended to provide high-level national thinking, that can be used to feed into the regional work, for example the work on Freight from Road to Rail and HGV accidents. In these cases, we would be keen to engage with DfT to understand the emerging findings from this work, and feed in our own knowledge and perspectives to help DfT in developing its thinking.
- 3.9 In other cases, we understand that nationally-led work will be incorporated into the area studies. For example, opportunities for Influencing Travel Behaviour and Integrated Demand Management are likely to be integrated into the Access to Birmingham Study.
- 3.10 The national Access to Birmingham study is of crucial importance to the West Midlands region, and is our priority for engagement with DfT. Our own analysis has highlighted the importance of improved connectivity to Birmingham and the adjacent urban areas of the Black Country and Solihull. We therefore propose that this be a jointly supported piece of work with joint governance arrangements between DfT and our region.
- 3.11 We understand that the key area of interest for the Corridor Routeing Study is the relationship between the M1 and A1 corridors, given the opportunity to make better use of 'spare' capacity on the A1. We would, however, wish to point out the importance of considering the M6 as a critical element in north-south movements within the UK, with a particular need to make better use of the M6 Toll as a key asset in catering for strategic movements.
- 3.12 Access to Heathrow is of critical importance to the competitiveness of the West Midlands region. We recognise the work that is already being led by High Speed 2 in examining connectivity between the West Midlands and Heathrow, and we would wish to build on this work, particularly in the national work on Access to Birmingham.
- 3.13 Access to Manchester is important for the north of the region, both in connecting to Manchester Airport as a key international hub and in connecting with the economic dynamism of the Manchester City Region. We would therefore wish to engage with the DfT and North West region as this work progresses.

Commitment from the West Midlands to supporting DfT in its national studies

- 3.14 The West Midlands is highly committed to supporting the DfT in the national studies as they apply to our region. We propose to undertake joint work with the DfT in the Access to Birmingham study. We are also keen to engage with DfT in its work on north-south movements if these are not addressed in the Access to Birmingham study. In view of the importance of rail freight to the West Midlands, we are also keen to offer regional expertise and input into the national Freight from Road to Rail study.

4. Work Programme and Funding Priorities

Introduction

- 4.1 Our work programme demonstrates a clear link between our priority themes, the work that is being proposed and the broad outputs that it should deliver.
- 4.2 This chapter describes the process of taking the three priority themes and engagement with the national work, described in Chapters 2 and 3, to develop the proposed work programme for the West Midlands.

Priority themes and Design of studies

- 4.3 We have designed our programme of regional studies to address the priority themes and the geographical areas where the issues are most complex.
- 4.4 These studies – and the relationships with the three themes and travel challenges – are described below.

Study 1: Reducing the demand for travel and changing travel behaviour

Study name	STUDY 1: REDUCING THE DEMAND FOR TRAVEL AND CHANGING TRAVEL BEHAVIOUR	
Priority Theme(s)	1: More sustainable communities across the West Midlands	
DaSTS goal(s)	Tackling climate change; Quality of life	Travel Challenges: WM4, WM7, WM8
Need for study	<ul style="list-style-type: none"> The RSS revision process focuses substantial development in the major urban areas and settlements of significant development. It is critically important to ensure that future development contributes towards the development of more sustainable communities rather than continuing past trends. Sustainable communities offer the potential to bring about reductions in travel demand, as people will have easier access to the necessary facilities and they may also bring about a change in travel behaviour as more sustainable travel patterns emerge. It is generally accepted that ‘smarter choices’ can help to manage travel demand, improve health and well-being and reduce emissions. There is much to build on in the West Midlands but there is a gap in our collective understanding of how best to deliver ‘smarter choices’. Many people say they will change their travel behaviour, but not enough do. While there are significant potential benefits there are ‘barriers’ inhibiting our behaviour. We need to overcome those ‘barriers’. This issue was identified in the RTPAP, particularly the potential to support the delivery of a low-carbon economy. Tackling climate change is a major challenge for us all; the Stern Review made clear that failure to act now to reduce CO₂ emissions will result in much greater impacts in the future, both on our environment and our economy. The transport sector in the West Midlands must contribute towards reducing CO₂ emissions. The evidence shows that total CO₂ production is particularly high for journeys to, from and within the Metropolitan Area and that the greatest opportunity to reduce CO₂ emissions is through reducing the need to travel and changing our behaviour. A study is required build on our collective experience, best practice and research, to examine how and where this can best be achieved. 	
Questions to be answered in study	<ul style="list-style-type: none"> What does existing experience tell us about which smarter choices measures work best and why? This will build on the work of TIF, RTPAP, Worcester Sustainable Travel Demonstration Town, the Sustainable Travel City Bid being prepared by the seven metropolitan authorities and Centro, and Smarter Choices: Changing the Way We Travel. Where in the region (and for what types of journey) would delivery of smarter choices measures have most effect, and what types of interventions? How much impact would they have, particularly in terms of CO₂ reduction? What ‘harder’ measures would be needed to facilitate these impacts in these areas (e.g. increased public transport capacity, parking policy)? What does experience tell us about how to deliver smarter choices measures? How can the ‘door to door’ journey be improved – what are the barriers to delivery to be overcome? What practical steps do we need to take to ensure that New Growth Points and settlements of significant development are developed in a sustainable way? 	
Study outputs	<ul style="list-style-type: none"> Identification of specific interventions in specific areas and their impacts. How to deliver, monitor and appraise interventions. 	

Study 2: Access to Birmingham

Study name	STUDY 2: ACCESS TO BIRMINGHAM (JOINT STUDY FOR THE NATIONAL AND CITY & REGIONAL NETWORKS FOCUSING ON BIRMINGHAM, THE BLACK COUNTRY AND SOLIHULL)		
Priority Theme(s)	2: Better travel choices supporting a stronger, lower carbon economy 3: More efficient and reliable journeys in urban areas and connecting the region		
DaSTS goal(s)	Supporting economic growth; Tackling climate change	Travel Challenges:	WM3, WM2, WM5, WM1, WM6
Need for study	<ul style="list-style-type: none"> Supporting the region’s economy and reducing the GVA gap is a key priority for the region. Congestion is particularly widespread and acute in the West Midlands conurbation, imposing high economic costs on business in the conurbation. Transport interventions can however support the economy by improving the ability of all the networks (both public transport and road) to cater for business and commuting trips, providing additional capacity where necessary, and by meeting the needs of the freight industry. Improving the reliability of journey times by road caused by congestion and non-recurrent delays is an important element and will also contribute to reducing CO₂ emissions. These challenges are particularly acute in the West Midlands conurbation (Birmingham, Solihull and Black Country). It is important to put plans into place for housing growth and the delivery of new employment land. The provision of effective travel choices is fundamental in catering for this growth. The DfT has also identified the need for an ‘Access to Birmingham’ study on the national network. The West Midlands region has a particular interest in understanding the interactions between the national and city & regional networks, and the opportunities to maximise the efficiency of end-to-end journeys. 		
Questions to be answered in study	<ul style="list-style-type: none"> What are/will be the key travel patterns to, from and within the West Midlands conurbation for people and goods (including mode share, generalised costs etc)? This will build on substantial evidence from the TIF work and existing models (including the existing strategic PRISM model) and DfT work on the national networks. Which journeys are most important to the economy? How do/will the transport networks/travel conditions inhibit economic activity in the conurbation (e.g. journey times, reliability)? Which are/will be the most inhibiting factors in the area, what are their underlying causes (e.g. of congestion)? Again, building on previous work on TIF, RTPAP etc. How can the underlying causes be overcome? The TIF work in particular developed a large number of options and there may be other options emerging from the RUS and national freight and IDM studies. Study 1 and national ITB study will have identified potential smarter choices options. What impacts will the interventions have on economic performance (and CO₂ emissions)? 		
Study outputs	<ul style="list-style-type: none"> Measures to tackle gaps in connectivity, improve journey times and journey time reliability, quality and choice of travel across all modes for strategic journeys to, from or within the conurbation. Forecast impacts of options/packages in terms of GVA and CO₂. A clearer understanding of the strategic role of the regions capital and the priorities for its linkages to the wider region Transport interventions and policies to feed back into wider policy-making, for both the region and conurbation. 		

Study 3: Improving Connectivity in the Coventry North – South Corridor

Study name	STUDY 3: IMPROVING CONNECTIVITY IN THE COVENTRY NORTH-SOUTH CORRIDOR	
Priority Theme(s)	2: Better travel choices supporting a stronger, lower carbon economy 3: More efficient and reliable journeys in urban areas and connecting the region	
DaSTS goal(s)	Supporting economic growth; Tackling climate change	Travel Challenges: WM3, WM2, WM1, WM6
Need for study	<ul style="list-style-type: none"> Supporting the region's economy and reducing the GVA gap is a key priority for the region. Congestion in the Warwick-Leamington Spa-Kenilworth-Coventry-Nuneaton corridor is a concern, imposing high costs on business. Transport interventions can however support the economy by improving the ability of all the networks (both public transport and road) to cater for business and commuting trips, providing additional capacity where necessary, and by meeting the needs of the freight industry. Improving the reliability of journey times by road caused by congestion and non-recurrent delays is an important element and will also contribute to reducing CO₂ emissions. These challenges are regionally significant in the north-south corridor linking Nuneaton, Coventry, Kenilworth and Leamington Spa. It is important to take into account plans for significant housing growth and the delivery of new employment land as a result of the RSS revision process, and the provision of effective travel choices is crucial in catering for this growth. 	
Questions to be answered in study	<ul style="list-style-type: none"> What are/will be the key travel patterns to, from and within the Coventry north-south corridor for people and goods (including mode share, generalised costs etc)? This will build on substantial evidence from the TIF work (in Coventry) and existing models. Which journeys are most important to the economy? How do/will the transport networks/travel conditions inhibit economic activity in the corridor (e.g. journey times, reliability)? This will build on the evidence base from the TIF work and existing models. Which are/will be the most inhibiting factors in the area and their underlying causes (e.g. of congestion)? How can the underlying causes be overcome? The TIF work and RTPAP in particular considered a number of options and there may be other options emerging from the RUS and national freight and IDM studies. Study 1 and national smarter choices studies will have identified potential smarter choices options. What impacts will the interventions have on economic performance (and CO₂ emissions)? 	
Study outputs	<ul style="list-style-type: none"> Measures to tackle the gaps in connectivity, improve journey times and journey time reliability, quality and choice of travel across all modes for strategic journeys to, from or within the Coventry north-south corridor. Forecast impacts of options/packages in terms of GVA and CO₂. Transport interventions and policies to feed back into wider policy-making, for both the region and sub-region. 	

Study 4: Improving Connectivity to and within North Staffordshire

Study name	STUDY 4: IMPROVING CONNECTIVITY TO AND WITHIN NORTH STAFFORDSHIRE	
Priority Theme(s)	2: Better travel choices supporting a stronger, lower carbon economy 3: More efficient and reliable journeys in urban areas and connecting the region	
DaSTS goal(s)	Supporting economic growth; Tackling climate change	Travel Challenges: WM3, WM2, WM1, WM6
Need for study	<ul style="list-style-type: none"> Supporting the region's economy and reducing the GVA gap is a key priority for the region. The Newcastle/ Stoke/ Hanley urban core experiences significant congestion and poor levels of accessibility, imposing high costs on business. Transport interventions can reduce economic costs to business by improving the ability of all the networks to cater for business and commuting trips, providing additional capacity where necessary, and by meeting the needs of the freight industry. Reducing the unreliability of journey times by road caused by congestion and non-recurrent delays is important in this and will also contribute to reducing CO₂ emissions. These challenges are regionally significant in North Staffordshire, especially around Stoke / Newcastle-under-Lyme. 	
Questions to be answered in study	<ul style="list-style-type: none"> What are/will be the key travel patterns to, from and within the Stoke journey to work area for people and goods (including mode share, generalised costs etc)? This will build on evidence from existing models (upgrading of which will be taking place during the next year) and from the previous North Staffordshire Integrated Transport Study. Which journeys are most important to the economy? Note the area has connectivity to economic drivers outside the region (e.g. Crewe, Manchester). How do/will the transport networks/travel conditions inhibit economic activity in North Staffordshire (e.g. journey times, reliability, and is there also a problem with public transport accessibility)? This will build on the evidence base from existing models. Which are/will be the most inhibiting factors in the area and are their underlying causes (e.g. congestion)? How can the underlying causes be overcome? The RTPAP in particular considered a number of options and there may be other options emerging from the RUS and national freight and IDM studies. Study 1 and the national smarter choices study will have identified potential smarter choices options. What impacts will the interventions have on economic performance (and CO₂ emissions)? 	
Study outputs	<ul style="list-style-type: none"> Measures to tackle gaps in connectivity, improve journey times and journey time reliability, quality and choice of travel across all modes for strategic journeys to, from or within North Staffordshire area. Forecast impacts of options/packages in terms of GVA and CO₂. 	

4.5 These studies will collectively address the key challenges that need to be better understood in the West Midlands region, and will significantly enhance our capacity in the region to deliver the DaSTS goals.

National studies

4.6 Our priority is to work jointly with DfT in leading the **Access to Birmingham** study. There is a very strong interaction between the national and city & regional networks in the West Midlands Metropolitan Area, with long distance and local rail services sharing limited rail network, and significant interaction in use between the local and national road networks.

- 4.7 We have set out our perspective on the joint Access to Birmingham study in our proposal for Study 2, described above, and we look forward to discussing the scope of this work with DfT national networks colleagues.
- 4.8 We also look forward to engaging with the other national networks studies that we previously highlighted in Chapter 3. We are particularly keen to engage with the team leading the Corridor Routeing Study, particularly given the high levels of nationally important longer-distance traffic passing through the West Midlands region. Given the importance of freight to the region, we are keen to offer our expertise in providing advice to the national Freight from Road to Rail study.

Cross-cutting activity in the region

- 4.9 In developing our regional work programme, we have identified the need to enhance the capacity of the region, both in terms of management of knowledge and in coordination of the extensive study activity that is planned during the next two years.

Cross-cutting Activity 1: Stakeholder Engagement

- 4.10 First, we propose an integrated programme of stakeholder engagement across the region. This will build support for the principles of DaSTS amongst regional stakeholders, including local authorities, the business community, voluntary sector and special interest groups. We recognise the very significant challenges of reducing carbon emissions whilst supporting economic prosperity, within a likely climate of reduced transport funding, and buy-in to our regional agenda will be crucial.
- 4.11 This will encompass general communication about regional DaSTS process and specific engagement in relation to individual studies. We will ensure that stakeholder engagement is targeted to relevant groups at specific times, promoting inclusion in deliberation processes but avoiding consultation fatigue.
- 4.12 The planning of the programme of regional engagement will commence in July 2009, to provide a foundation for the planning of the individual studies and to identify region-wide resources that will be required during the next two years.

Cross-cutting Activity 2: Building our Capacity

- 4.13 We are conscious that we will need to develop the capacity of regional partners in leading the DaSTS process in the West Midlands. This will require some targeted recruitment to provide the staff 'headroom' to enable us to effectively manage our planned work programme. We are currently considering the appointment of consultancy support to provide dedicated programme management capacity to enable the delivery of the work programme.
- 4.14 We also plan to undertake targeted training and professional development of our current teams to provide them with the skills needed during the next two years.
- 4.15 We propose to commence planning for building our capacity during July 2009 as a key part of the governance of our planned work programme.

Cross-cutting Activity 3: Maintaining our Evidence Base

- 4.16 An important priority for the region is in developing our 'library of intelligence', including study work that has already taken place. This will ensure that effective sharing of knowledge takes place, with previous study work being stored in a central regional library, and dissemination of key data and findings. This work will provide a crucial foundation for the individual studies and region-wide work, enabling those tasked with the study work to rapidly absorb key issues that must be addressed.
- 4.17 We propose to commence development of this library in July 2009, therefore providing the evidence base to form the foundations for the future study work, which is expected to commence in September 2009.

Cross-cutting Activity 4: Mapping against RTPAP

- 4.18 The Regional Transport Priorities Action Plan (RTPAP), published in December 2008, was the culmination of a process that involved extensive work in developing the region's medium to long term transport agenda. This included consideration of a wide range of transport interventions across the region, and prioritisation of the interventions against criteria relating to strategic fit, value for money and deliverability. This comprised extensive technical analysis and engagement with stakeholders, which has given the region a strong foundation for taking forward the DaSTS agenda.
- 4.19 The West Midlands region wishes to ensure that the strong foundation set by the RTPAP continues to inform and compliment the DaSTS work programme, as it is developed for the region. We will therefore be setting in place mechanisms to ensure that the RTPAP 'knowledge bank' is used in undertaking all study work, including the evidence base and interventions that have previously been identified.

The overall work programme and our funding priorities

- 4.20 We set out in Table 4.1 overleaf the elements of our work programme, which is in the format requested by DfT in its guidance to the regions.
- 4.21 It can be seen that we propose to focus the effort of our regional work on a small number of studies, in which we can undertake substantive work to develop our intellectual capital and to develop innovative approaches to addressing our travel challenges. In particular, we would wish to highlight our proposal to undertake joint work with the DfT in examining issues related to Access to Birmingham, with a significant budget dedicated to this work.
- 4.22 Importantly, we also propose to set aside resources to develop our region-wide capacity to deliver the DaSTS agenda, including management of stakeholder engagement, additional resources to manage the DaSTS programme, developing the evidence base library, and ensuring adequate integration with our previous work to develop the RTPAP. We propose to put in place region-wide governance arrangements from July 2009 onwards, building on the strong joint-working that is already in place in the West Midlands.
- 4.23 We consider that this proposed work programme will place the West Midlands on a strong footing for taking forward the DaSTS agenda in the region, and we look forward to discussing these proposals with DfT. Chapter 5 of this submission follows with the proposals for management of our regional work programme.

Headroom

- 4.24 We will continue to work closely with the DfT and regional partners to ensure that the DaSTS process cements the priorities we have set out in the Transport Investment Programme in our RFA Round 2 advice. The DaSTS process offers us an opportunity to better align our spending programmes over the period 2014-2019 and we wish to ensure the best use of future investment.

Table 4.1 – The Proposed West Midlands Work Programme

Element of work programme	Funding priority	Lead contact	Main Partners	Link to strategic priorities	Total cost	Time frame	DfT funding required	Regional contribution
Priority theme 1 – More sustainable communities across the West Midlands								
Study 1: Reducing the demand for travel and changing travel behaviour	High	Project Group Rep.	Centro; Worcestershire CC; Highways Agency	WM4, WM7, WM8	£500k	Sept 2009 – March 2011	£400k	HA: £50k (2009/10); WMRA (housing) : £50k (2009/10); Alignment with sub-regional work; Staff time
Priority theme 2 – Better travel choices supporting a stronger, lower-carbon economy								
Priority theme 3 – More efficient and reliable journeys in urban areas and connecting the region								
Study 2: Access to Birmingham (focussing on Birmingham, the Black Country and Solihull, joint with DfT)	High	Project Group Rep.	DfT; Birmingham CC; Centro; Network Rail; Highways Agency	WM2, WM3, WM5, WM1, WM6	£750k	Sept 2009 – March 2011	£600k	Alignment with sub-regional work; Staff time
Study 3: Improving connectivity in the Coventry North-South Corridor	High	Project Group Rep.	Coventry CC; Warwickshire CC; Centro; Network Rail; Highways Agency	WM2, WM3, WM1, WM6	£300k	Sept 2009 – March 2011	£250k	Alignment with sub-regional work; Staff time
Study 4: Improving connectivity to and within North Staffordshire	High	Project Group Rep.	North Staffordshire Regeneration Partnership; Network Rail; Highways Agency	WM2, WM3, WM1, WM6	£300k	Sept 2009 – March 2011	£250k	Alignment with sub-regional work; Staff time
Cross-cutting regional activities								
Cross-cutting Activity 1: Stakeholder Engagement	High	Steering Group	Regional stakeholders	All	£200k	Jul 2009 – Mar 2011	£150k	Alignment with sub-regional work; Staff time
Cross-cutting Activity 2: Building our Capacity	High	Steering Group	Regional stakeholders	All	£200k	Jul 2009 – Mar 2011	£150k	Alignment with sub-regional work; Staff time
Cross-cutting Activity 3: Maintaining our Evidence Base	High	Steering Group	Regional stakeholders	All	£100k	Jul 2009 – Mar 2011	£100k	Alignment with sub-regional work; Staff time
Cross-cutting Activity 4: Mapping against RTPAP	High	Steering Group	RTPAP Priority Leads	Cross-cutting	£150k	Sept 2009 – March 2011	£100k	Alignment with sub-regional work; Staff time
Working with DfT on National Networks Studies								
Access to Birmingham	<i>See Study 2</i>							
Input to others (N2S Corridor Routing, Freight, Access to LHR and Access to Manc.)	Medium	Project Group	Regional stakeholders	All	-	TBC by DfT	-	Alignment with sub-regional work; Staff time
Total					C.£2.5m		Circa £2.0m	Circa £0.5m: £100k + in kind (staff and project alignment)

5. Programme Management

Introduction

- 5.1 The West Midlands considers it of the utmost importance to ensure that the regional DaSTS work programme is effectively managed. The region has identified a number of potential challenges in managing the future work programme, and has started putting in place mechanisms to ensure the successful delivery of our proposed work.
- 5.2 This chapter sets out proposed arrangements in relation to allocation of staff resources, governance and risk management for our work in the region.

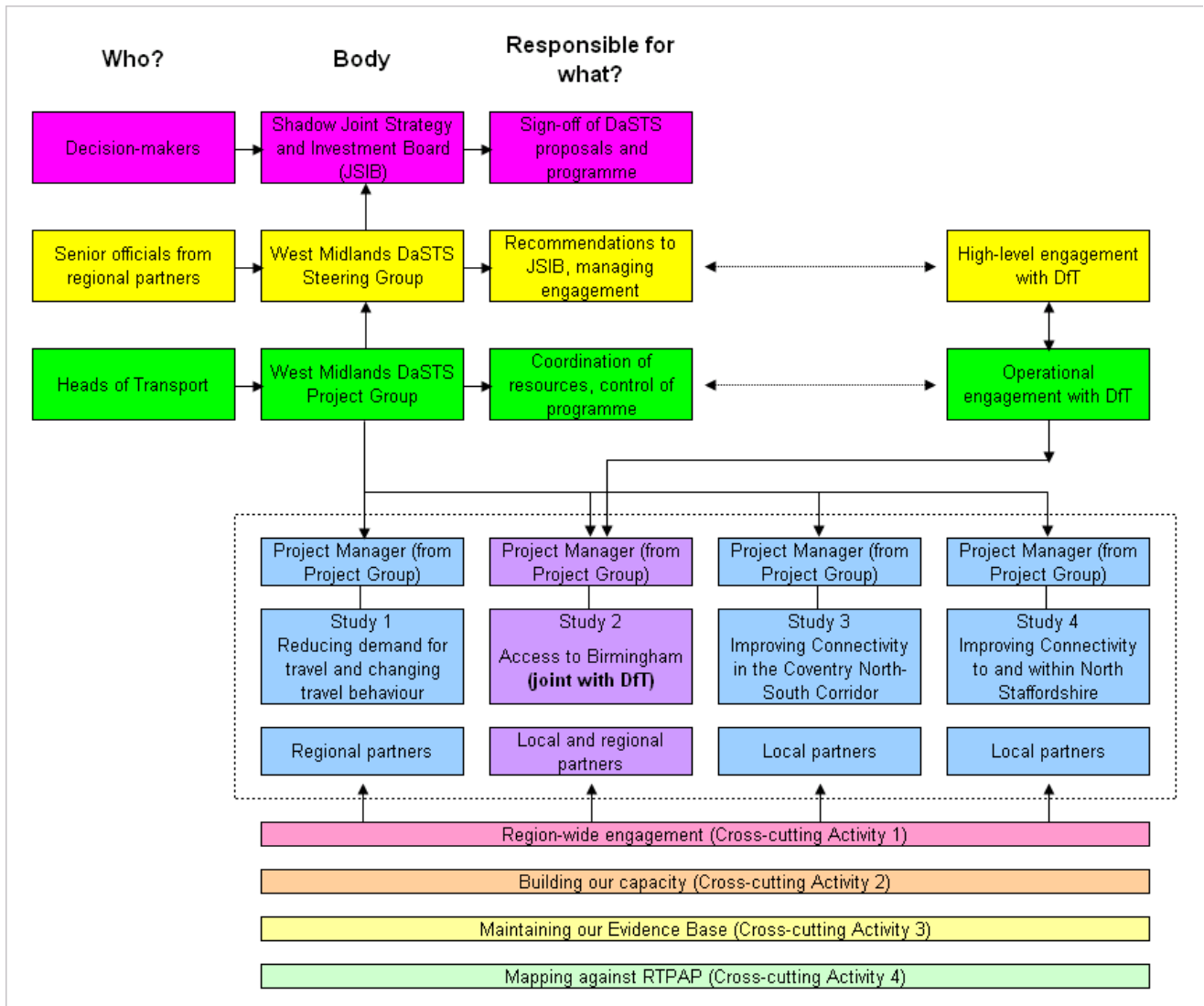
Staff Resources

- 5.3 The region has made a commitment to aligning its resources to ensure the efficient delivery of the DaSTS work programme in the region. There is widespread support amongst regional partners and delivery agencies for the principles of the DaSTS work programme, and partners have made commitments to providing staff resources to support the delivery of our proposed study work.
- 5.4 We have identified the need to build the capacity of the management team at the regional level. A portion of our budget in the submission has been allocated for building capacity. As highlighted under Cross-cutting Activity 2 in Chapter 4, we have identified the need for recruitment of additional staff, including secondments and the appointment of programme management support to the regional management team. We are currently in the process of considering our preferred approach and will be able to discuss this with DfT in the near future.

Governance

- 5.5 The West Midlands has put in place governance structures for the DaSTS work in the region. These structures have been developed for this Stage 1 work, and we recognise that these will need to evolve to accommodate the challenges of managing the work programme during Stages 2 and 3. The proposed governance structures for DaSTS are shown in Figure 5.1 overleaf.

Figure 5.1 – Governance Model for the West Midlands



- 5.6 The DaSTS work in the region will be overseen by the shadow Joint Strategy and Investment Board (JSIB), which has been developed as the regional model for taking forward the recommendations of the Sub-National Review. The JSIB will be the key decision-making body: it has approved this Stage 1 submission and will approve key milestones and deliverables from the DaSTS process.
- 5.7 The JSIB will delegate responsibility for programme and project management, whilst retaining oversight of the overall direction of the DaSTS process and its outcomes in the region.
- 5.8 The delivery of the DaSTS work will be overseen by the West Midlands DaSTS Steering Group, comprising senior officials from regional organisations, including Advantage West Midlands, West Midlands Regional Assembly, Government Office, the Highways Agency, Network Rail, Local Government and the Integrated Transport Authority (Centro). The Steering Group will be responsible for making recommendations to the JSIB, based on information provided by the Project Group. The Steering Group will also steer the stakeholder engagement process in the region.
- 5.9 The day-to-day management of DaSTS in the region will be managed by the West Midlands DaSTS Project Group, which in general comprises the Heads of Transport from the key regional partners. The Project Group will benefit from in-depth expertise in regional transport issues, and it will also include the client-side project managers of the four individual regional studies.

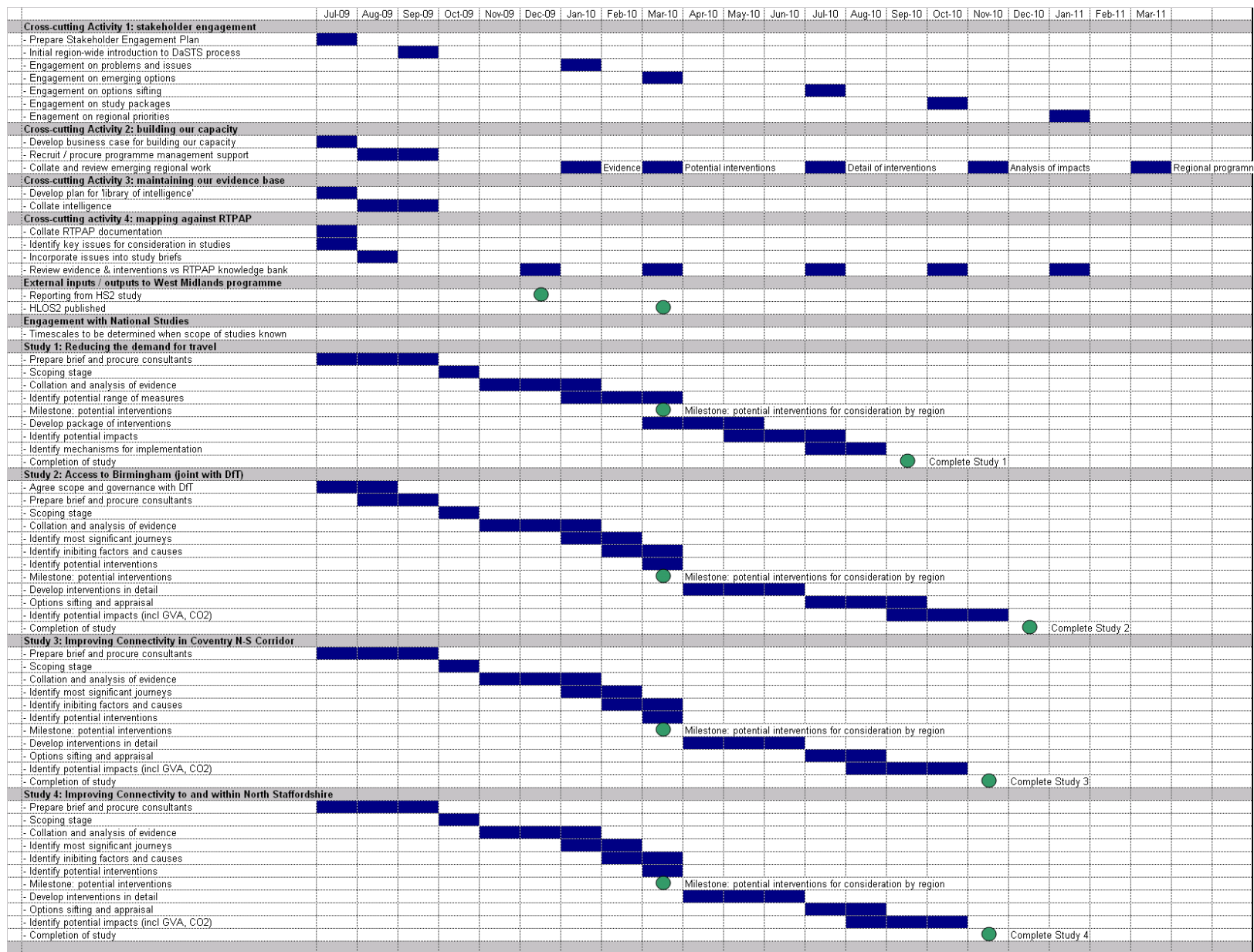
Draft Programme of Work

- 5.10 The region has given consideration to the scheduling of key activities within the four studies and the cross-cutting regional activity, and this is presented in Figure 5.2 overleaf.
- 5.11 This programme will continue to be refined during July and August 2009, as the region develops the cross-cutting activities and prepares for the four potential regional studies.

Risk Management

- 5.12 The region will take a proactive approach to the management of risk in the DaSTS work programme. We have already commenced the process of identifying potential risks, at both programme and study level, including the following:
- Controlling any lack of buy-in from regional partners will be mitigated through our planned cross-cutting stakeholder engagement activity;
 - Controlling any lack of knowledge transfer from previous work will be mitigated through our planned cross-cutting activities in maintaining the regional evidence base and mapping against the previous RTPAP work;
 - Controlling any lack of effective engagement with DfT on the national studies will be mitigated through the proposed joint Access to Birmingham study and agreed engagement protocols for other studies from the outset;
 - Controlling any gaps in model coverage or lack of data for studies will be mitigated through a scoping phase at the start of each study, giving the opportunity to collate additional data during Autumn 2009 if necessary; and
 - Controlling any recommended interventions that are unacceptable to regional partners, unaffordable or otherwise not deliverable will be mitigated through early engagement with DfT to agree likely funding envelopes.
- 5.13 The region will be developing a comprehensive risk register that will be regularly updated and reported through the regional governance structures described above.

Figure 5.2 – West Midlands Draft Programme of Work



Appendix A – Analysis of Strategic Fit

Table A.1 – Mapping of strategic outcomes under the five national DaSTS goals

High Level Strategic Outcome	Desired Travel Outcome	Impact of Outcome
DaSTS GOAL: SUPPORT ECONOMIC GROWTH		
<ul style="list-style-type: none"> • Become an economically successful, outward looking, adaptable region (<i>WMRSS</i>) • Birmingham to gain recognition as a 'World City' (<i>WMRSS, WMES</i>) • Become an advanced, thriving and diverse economy (<i>WMRSS, WMES</i>) • Increased employment opportunities (<i>WMRSS</i>) • High quality, healthy, affordable and sustainable living and working environments (<i>WMRSS</i>) • Become a global centre where people and businesses choose to connect (<i>WMES</i>) • Support economic competitiveness, employment and productivity (<i>RTPAP</i>) 	<ul style="list-style-type: none"> • Efficient network of integrated transport facilities and services (<i>WMRSS</i>) • Improved quality of transport networks (<i>WMRSS, WMES, RTPAP</i>) • Traffic management and public transport improvements in corridors (<i>WMRSS, RTPAP</i>) • Improved public transport to education and jobs (<i>WMRSS, WMES</i>) • Strengthen international links by rail and air (<i>WMRSS, WMES, RTPAP</i>) • Overcome capacity constraints at Birmingham New Street Station (<i>WMRSS, RTPAP</i>) • Increased regional rail capacity for both passengers and freight (<i>RTPAP</i>) • Improve regional and national connectivity (<i>RTPAP</i>) • Improve international connectivity (<i>RTPAP</i>) 	<ul style="list-style-type: none"> • Reduction in social exclusion (<i>WMRSS</i>) • Improved economic performance (<i>WMRSS</i>) • More sustainable pattern of development (<i>WMRSS</i>) • Employment growth (<i>WMRSS</i>) • Greater levels of development, retained population and jobs (<i>WMRSS</i>)
<ul style="list-style-type: none"> • Successfully achieve urban and rural renaissance (<i>WMRSS</i>) • High quality urban design and architecture (<i>WMRSS</i>) • High quality, distinctive natural and built environment (<i>WMRSS, WMES</i>) • Economic growth in major urban areas (<i>WMES</i>) • Support the appropriate levels of housing growth in the region (<i>RTPAP</i>) 	<ul style="list-style-type: none"> • Modern urban transport networks (<i>WMRSS</i>) • Restructure of transport networks (<i>WMRSS</i>) • Enhanced urban centres as the primary nodes of the public transport network (<i>WMRSS</i>) • Improved links between urban and rural areas (<i>WMRSS</i>) 	<ul style="list-style-type: none"> • Improved range and quality of services available to residents in rural areas (<i>WMRSS</i>)
DaSTS GOAL: TACKLING CLIMATE CHANGE		
<ul style="list-style-type: none"> • Significantly reduced regional emissions of CO₂ and other greenhouse gases (<i>CCAP</i>) • Identify and adapt to the likely implications of climate change (<i>CCAP</i>) • Plan for and deliver low carbon, well-adapted sustainable communities (<i>CCAP</i>) • Promote energy efficiency and low-carbon energy generation (<i>CCAP</i>) 	<ul style="list-style-type: none"> • New developments and infrastructure proposals to include walking/cycling access (<i>WMRSS, RTPAP</i>) • Reduced need to travel (<i>WMRSS</i>) • More effective use of canal towpaths (<i>CCAP</i>) • Deliver sustainable transport (<i>CCAP, WMRSS</i>) • Reduced car use and a significant shift towards more sustainable 	<ul style="list-style-type: none"> • Reduction in the need to commute (<i>WMRSS</i>) • Substantially reduced carbon emissions (<i>CCAP, WMRSS, WMES</i>) • Resilience to likely climate change impacts (<i>CCAP</i>)

High Level Strategic Outcome	Desired Travel Outcome	Impact of Outcome
<ul style="list-style-type: none"> • Ensure regional partners lead by example by significantly reducing carbon emissions from their own premises (CCAP) • Increase awareness and understanding of the implications of climate change (CCAP, WMRSS) • Reduce transport's emissions of carbon dioxide to contribute to tackling climate change (RTPAP) 	<p>modes (CCAP, WMRSS)</p> <ul style="list-style-type: none"> • Integrated transport facilities and services that meet individuals and business needs in a more sustainable way (WMRSS, WMES) 	
DaSTS GOAL: SAFETY, SECURITY & HEALTH		
<ul style="list-style-type: none"> • Improved air quality (CCAP, WMRSS) • Improved safety (WMRSS) • Contribute to better safety, security and health by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health (RTPAP) 	<ul style="list-style-type: none"> • Reduced demand to travel (WMRSS, WMES) • Modal shift from private car towards walking, cycling and public transport (WMRSS) • Safe and secure transport system (WMRSS) • Safe, secure and convenient walking/cycling networks (WMRSS) 	
DaSTS GOAL: EQUALITY OF OPPORTUNITY		
<ul style="list-style-type: none"> • Become a more cosmopolitan and inclusive region (WMES) • Opportunities for all to progress (WMRSS) • Reduction in social exclusion in rural areas (WMRSS) • Achieve everyone's potential supporting economic inclusion (RTPAP) 	<ul style="list-style-type: none"> • Equality of access to transport (WMES) • Increased accessibility for those currently disadvantaged in accessing jobs (WMRSS) 	<ul style="list-style-type: none"> • Improved accessibility to jobs and services (WMRSS)
DaSTS GOAL: QUALITY OF LIFE & NATURAL ENVIRONMENT		
<ul style="list-style-type: none"> • Improved quality of life and environment, without compromising future generations (CCAP) • Distinctive, high quality natural and built environment (WMRSS) • Adequate provision of accessible, high quality urban green space (WMRSS) • Improve quality of life for transport users and non-transport users (RTPAP) 	<ul style="list-style-type: none"> • Measures to reduce the impact of the environmental problems associated with transport growth (WMRSS) • Environmental improvements along major transport routes (WMRSS) • Protection given to footpaths and cycleways (WMRSS) 	<ul style="list-style-type: none"> • A more sustainable region (WMES)

Key:

WMRSS: Regional Spatial Strategy for the West Midlands, January 2008
 WMES: Connecting to Success: West Midlands Economic Strategy, December 2007
 CCAP: Climate Change Action Plan
 RTPAP: West Midlands Regional Transport Priorities Action Plan, December 2008.

Table A.2 – Mapping of strategic outcomes under the three West Midlands strategic priorities

WM strategic priority	Selected objectives (RSS, RES, CCAP, RTPAP)	Travel Outcomes	DaSTS goals				
			Economic growth	CO2 emissions	Safety, security, health	Equality of opportunity	Quality of Life & environment
Sustaining and strengthening the West Midlands' economy. Businesses	<ul style="list-style-type: none"> Become an advanced, thriving & diverse economy. Become a prosperous, economically successful, outward looking, adaptable region. 	<ul style="list-style-type: none"> Faster, more reliable and lower cost access to suppliers and markets, including freight. Faster, more reliable and lower cost business journeys. Faster, convenient and affordable journeys for employees. 	✓				
	<ul style="list-style-type: none"> Support economic competitiveness, employment and productivity. 		✓				
	<ul style="list-style-type: none"> Greater levels of development, retained population and jobs. 		✓				
	<ul style="list-style-type: none"> Sustainable economic growth in appropriate locations. 	<ul style="list-style-type: none"> Transport capacity and accessibility that enables new employment sites in appropriate locations in the West Midlands. 	✓				✓
	<ul style="list-style-type: none"> Birmingham to gain recognition as a world city. 	<ul style="list-style-type: none"> Key strategic transport gateways present an image of Birmingham in keeping with its status as a European and world city. 	✓				✓
	<ul style="list-style-type: none"> Identify and adapt to the likely implications of climate change. 	<ul style="list-style-type: none"> Minimise disruption to journeys caused by shocks and impacts such as adverse weather and the impacts of climate change. 	✓	✓	✓		✓
	<ul style="list-style-type: none"> Significantly reduced regional emissions of CO2 and other greenhouse gases. Reduce transport's emissions of carbon dioxide to contribute to tackling climate change. 	<ul style="list-style-type: none"> Minimise the demand for travel. Modal shift to lower carbon transport modes, including to low carbon vehicles. 		✓			

WM strategic priority	Selected objectives (RSS, RES, CCAP, RTPAP)	Proposed Travel Outcomes	DaSTS goals				
			Economic growth	CO2 emissions	Safety, security, health	Equality of opportunity	Quality of Life & environment
Delivering urban and rural renaissance –including housing growth and provision of affordable homes. Places	<ul style="list-style-type: none"> • Successfully achieve urban and rural renaissance. • High quality, healthy, affordable and sustainable living and working environments. • High quality, distinctive natural and built environment. • Improved quality of life and environment without compromising future generations. • Improve quality of life for transport users and non-transport users. 	<ul style="list-style-type: none"> • Maximise the transport networks' contribution to high quality urban townscapes and rural landscapes. • Minimise the impacts of transport on people and communities, for example severance and noise by reducing traffic levels in sensitive locations. • Minimise the impacts of transport on the natural environment and heritage and seek long term environmental benefits in the region. 	✓			✓	✓
	<ul style="list-style-type: none"> • Support the appropriate levels of housing growth in the region. 	<ul style="list-style-type: none"> • Address the additional demand for travel resulting from the provision of appropriate levels of housing across the region. 	✓				✓
	<ul style="list-style-type: none"> • Reduction in social exclusion in rural areas. 	<ul style="list-style-type: none"> • Improved connections between rural areas and employment opportunities and local services by public transport. 	✓			✓	✓
	<ul style="list-style-type: none"> • Improved accessibility to jobs and services. • Improved range and quality of services available to residents in rural areas. 	<ul style="list-style-type: none"> • Improved connections between deprived urban areas and employment opportunities and local services by public t'port. 	✓			✓	✓
	<ul style="list-style-type: none"> • Plan for low-carbon, well-adapted, sustainable communities. 	<ul style="list-style-type: none"> • Minimise the demand for travel. • Modal shift to lower carbon transport modes, including to low carbon vehicles. 		✓			
	<ul style="list-style-type: none"> • Improved air quality. • Improved safety and security. • Contribute to better safety, security and health by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health. 	<ul style="list-style-type: none"> • Minimise the demand for travel. • Modal shift to lower carbon transport modes, including to low carbon vehicles, especially where air quality is worst. 			✓		✓
		<ul style="list-style-type: none"> • Minimise the risk of death or injury due to transport accidents. • Minimise crime, fear of crime and anti-social behaviour on the transport networks. 			✓		✓
		<ul style="list-style-type: none"> • Improve the health of individuals by encouraging and enabling more physically active travel. 			✓		✓
Expanding skills and employment. People	<ul style="list-style-type: none"> • Increased employment opportunities. • Become a more cosmopolitan and inclusive region. • Opportunities for all to progress. Achieve everyone's potential supporting economic inclusion. 	<ul style="list-style-type: none"> • Maximise access to education and training, especially by sustainable modes (including affordability). • <i>These objectives are also captured through the travel outcomes described above.</i> 	✓			✓	

Table A.3 – Development of an initial set of travel challenges for the West Midlands

Travel Outcomes	Related Travel Challenges	DaSTS goals				
		Economic growth	CO2 emissions	Safety, security, health	Equality of opportunity	Quality of Life & environment
<ul style="list-style-type: none"> Faster, more reliable and lower cost access to suppliers and markets, including freight. Faster, more reliable and lower cost business journeys. Faster, convenient and affordable journeys for employees. 	<ul style="list-style-type: none"> Addressing the impacts of road congestion, particularly on freight and business travel (WM1). Improving the ability of the rail network to meet the needs of travellers and freight movements (WM2). Improving the ability of the public transport network (rail, bus, Metro) to cater for travel, especially to work (WM3). 	✓				
		✓	✓			
		✓	✓		✓	
<ul style="list-style-type: none"> Transport capacity and accessibility that enables new employment sites in appropriate locations in the West Midlands. 	<ul style="list-style-type: none"> Addressing the demand for travel resulting from new development, both employment and housing (WM4). 	✓	✓			✓
<ul style="list-style-type: none"> Key strategic transport gateways present an image of Birmingham in keeping with its status as a European and world city. 	<ul style="list-style-type: none"> Overcoming the gaps in capacity and quality of the strategic transport gateways and corridors to/from Birmingham (WM5). 	✓				✓
<ul style="list-style-type: none"> Minimise disruption to journeys caused by shocks and impacts such as adverse weather and the impacts of climate change. 	<ul style="list-style-type: none"> Identifying the causes of, and planning for, non-recurrent delays on the transport networks (WM6). 	✓				✓
<ul style="list-style-type: none"> Minimise the demand for travel. Modal shift to lower carbon transport modes, including to low carbon vehicles. 	<ul style="list-style-type: none"> 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). 		✓			✓
			✓		✓	✓
<ul style="list-style-type: none"> Maximise the transport networks' contribution to high quality urban townscapes and rural landscapes. Minimise the impacts of transport on people and communities, for example severance and noise by reducing traffic levels in sensitive locations. Minimise the impacts of transport on the natural environment and heritage and seek long term environmental benefits in the region. 	<ul style="list-style-type: none"> Reducing traffic (especially HGVs) and/or mitigating its effects, in sensitive areas (WM9). Minimising the impacts of new transport infrastructure and travel on the natural environment (WM10). 	✓		✓	✓	✓
						✓
<ul style="list-style-type: none"> Address the additional demand for travel resulting from the provision of appropriate levels of housing across the region. 	<ul style="list-style-type: none"> Addressing the demand for travel resulting from new development, both employment and housing (WM4). 	✓	✓			✓
<ul style="list-style-type: none"> Improved connections between rural areas and employment opportunities and local services by public transport. Improved connections between deprived urban areas and employment opportunities and local services by public transport. 	<ul style="list-style-type: none"> Improving public and community transport accessibility and affordability in urban and rural areas (WM11). 	✓			✓	✓

<ul style="list-style-type: none"> Minimise the risk of death or injury due to transport accidents. Minimise crime, fear of crime and anti-social behaviour on the transport networks. 	<ul style="list-style-type: none"> Identifying measures to reduce further the number of deaths and injury accidents on roads (WM12). Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8). 			✓		
<ul style="list-style-type: none"> Improve the health of individuals by encouraging and enabling more physically active travel. 	<ul style="list-style-type: none"> Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8). 			✓	✓	✓
<ul style="list-style-type: none"> Maximise access to education and training, especially by sustainable modes (including affordability). 	<ul style="list-style-type: none"> Improving public and community transport accessibility and affordability in urban and rural areas (WM11). Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8). 	✓			✓	✓

Note:

- ✓ (large tick mark): signifies primary relationship.
- ✓ (small tick mark): signifies secondary relationship.

Appendix B – List of evidence sources

Table B.1 Sources of evidence

Study/Source	Year of Publication (where applicable)	Web Site (where applicable)	Relevant Transport Challenge
1. Eddington Study	2006	http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtonstudy/	WM1
2. Stern Review: Economics of Climate Change	2006	http://www.hm-treasury.gov.uk/sternreview_index.htm	WM7 WM1
3. Employment Statistics from ONS and Labour Force Survey	N/A	http://www.statistics.gov.uk/StatBase/Source.asp?vlnk=358&More=Y	WM3 WM4
4. Investing in a Low Carbon Britain	2009	http://www.decc.gov.uk/en/content/cms/news/090423_low_car/090423_low_car.aspx	WM7
5. Air Transport White Paper	2003	http://www.dft.gov.uk/about/strategy/whitepapers/air/	WM5
6. Department for Transport - Impact of crime on public transport	2004	http://www.dft.gov.uk/pgr/crime/tacklingcrimeonpublictransport	WM8 WM3
7. Tomorrow's Roads: Safer for everyone	2000	http://www.dft.gov.uk/pgr/roadsafety/strategytargetsp/erformance/tomorrowsroadsaferforeveryone	WM12
8. Transport Security: Travelling without fear	2007	http://www.parliament.the-stationery-office.com/pa/cm200708/cmselect/cmtran/191/191.pdf	WM3 WM8
9. TRANSEC Annual Reports – ports	2008	http://www.dft.gov.uk/pgr/security/about/transecannualreports/annualreport?page=3	WM2 WM3
10. Making the Connections: Final Report on Transport and Social Exclusion	2003	http://www.cabinetoffice.gov.uk/media/cabinetoffice/social_exclusion_task_force/assets/publications_1997_to_2006/making_transport_2003.pdf	WM3 WM4 WM11
11. West Coast Mainline Route Utilisation Strategy	2008	http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/west%20coast%20main%20line/west%20coast%20main%20line%20rus%20scope.pdf	WM2 WM3
12. Freight Route Utilisation Strategy	2007	http://www.networkrail.co.uk/browseDirectory.aspx?dir=%5CRUS%20Documents%5CRoute%20Utilisation%20Strategies%5CFreight&pageid=2895	WM2 WM3
13. High Speed 2	On-going	www.hs2.org.uk	WM2 WM3
14. High Speed Rail Development Project	2007	http://www.greengauge21.net/assets/GG21_HS2.pdf	WM2 WM3
15. West Midlands and Chilterns Route Utilisation Strategy	2008	http://www.networkrail.co.uk/browseDirectory.aspx?dir=%5CRUS%20Documents%5CRoute%20Utilisation%20Strategies%5CWest%20Midlands%20and%20Chilterns%5CWest%20Midlands%20and%20Chilterns%20RUS%20Baseline%20Information&pageid=4449&root=%5CRUS%20Documents%5CRoute%20Utilisation%20Strategies	WM2 WM3 WM5
16. Draft Regional Rail Development Plan	2009	http://www.centro.org.uk/consultation/rail_development_plan.asp	WM2 WM3
17. West Midlands Regional Spatial Strategy (and Sustainability Appraisal)	2004/2008	http://www.wmra.gov.uk/Planning_and_Regional_Spatial_Strategy/Regional_Spatial_Strategy/Regional_Spatial_Strategy_(RSS).aspx#Jan2008	ALL
18. West Midlands Economic Strategy: Connecting to Success	2008	http://www.advantagewm.co.uk/what-we-do/connecting-to-success/default.aspx	WM1- WM6
19. West Midlands Regional Housing Strategy	2005	http://www.wmra.gov.uk/Housing/Strategies/Regional_Housing_Strategy_2005.aspx	WM4
20. West Midlands sub-regional housing market assessment	2008	http://www.wmra.gov.uk/Housing/Sub_Regional_Housing_Market_Area_Partnerships/Sub_Regional_Housing_Market_Area_Partnerships.aspx	WM4
21. West Midlands Regeneration Zone Implementation Plans	2005 - 2008	http://www.advantagewm.co.uk/working-with-us/Regeneration-Zones/default.aspx	WM4
22. West Midlands Regional Climate Change Action Plan	2007	http://www.wmra.gov.uk/documents/WMidsClimateActionPlan.pdf	WM7 WM9
23. Counting consumption: CO2	2006	http://resource-	WM7

emissions, material flows and ecological footprint of the West Midlands		accounting.org.uk/uploads/Reports/ecobudget-wm-report-363.pdf	WM9
24. West Midlands Region LTP2s (and Strategic Environmental Assessments)	2006	various	WM1 WM9 WM11 WM12
25. North Staffordshire Integrated Transport Study	2006	http://www.stoke.gov.uk/ccm/content/rc/LTP/provisional-north-staffordshire-ltp.en	
26. Congestion Target Delivery Plan	2006	http://www.westmidlandsltp.gov.uk/congestion-target-delivery-plan/	WM1
27. Regional Transport Priorities Action Plan	2008	http://www.advantagewm.co.uk/Images/Regional%20Transport%20Priorities_080109_tcm9-16564.pdf	WM1 WM2 WM3 WM5
28. West Midlands Regional Integrated Economic Assessment	2009	http://www.wmro.org/standardTemplate.aspx/Home/OurResearch/Businessconomy/Regionalintegratedeconomicassessment	WM1 WM2 WM3
29. State of the Region Report, Update Report, 2007	2008	http://www.wmro.org/standardTemplate.aspx/Home/OurResearch/Placeenvironment/StateoftheRegionUpdateReport2007	WM7 WM9
30. Airport Master Plan to 2030: Planning a sustainable future for air transport in the Midlands	2007	http://www.wmro.org/displayResource.aspx/5736/Airport_master_plan_to_2030_Planning_a_sustainable_future_for_air_transport_in_the_Midlands.html	WM5
31. LDF DPD's Core Strategy	various	various	various
32. Transport Innovation Fund Studies	various	various	WM1 WM7
33. Low Carbon Evidence Base for the West Midlands	2007	http://www.advantagewm.co.uk/Images/Low%20Carbon%20Evidence%20Base%20for%20the%20West%20Midlands_tcm9-17942.pdf	WM7
34. Gridlock or Growth - Choices & Challenges for the Future	2006	http://www.westmidlandsltp.gov.uk/associated-groups/tif/	WM1
35. Gridlock or Growth - Towards an Integrated Transport System	2007	http://www.westmidlandsltp.gov.uk/associated-groups/tif/	WM2 WM3
36. Tackling Congestion, Delivering Growth	2008	http://www.westmidlandsltp.gov.uk/associated-groups/tif/	WM1
37. Planning for Transport Capacity to deliver the West Midlands Regional Economic Strategy	2007	http://etcproceedings.org/paper/planning-for-transport-capacity-to-deliver-the-west-midlands-regional-economic	WM4
38. West Midlands Regional Spatial Strategy – Phase Two Revision – Infrastructure Implications of the Housing Options	2007	http://www.wmra.gov.uk/Planning_and_Regional_Spatial_Strategy/RSS_Revision/RSS_Revision_Phase_2/RSS_Revision_Phase_2.aspx	WM4
39. West Midlands Regional Planning Assessment for the Railway	2006	http://www.dft.gov.uk/pgr/rail/strategyfinance/strategy/rpa/midlandsplanningassessme3516.pdf	WM2 WM3 WM5
40. Delivering for You, Route Plans 2008, Route 17 West Midlands	2008	http://www.networkrail.co.uk/browse%20documents/BusinessPlan2007/PDF/Route%2017%20West%20Midlands.pdf	WM2 WM3 WM5
41. Route Plans 2007, Routes 13 and 18, <i>Network Rail</i>	2007	http://www.networkrail.co.uk/browse%20documents/BusinessPlan2007/PDF/Route%2013%20Great%20Western%20Main%20Line.pdf	WM2 WM3 WM5
42. Dept for Transport – Regional Transport Statistics	2008	http://www.dft.gov.uk/adobepdf/162469/221412/221541/224511/439977/regtransportstats2008.pdf	various
43. ONS Census 2001 and Annual Population Survey		http://www.statistics.gov.uk/hub/population/index.html	various
44. WMRSS – Infrastructure Review Report, Mott MacDonald	2007	http://www.wmra.gov.uk/documents/Final_RSS_Infrastructure_Review_Report_0111071.pdf	WM4 WM5 WM7 WM11
45. West Midlands Route Unitisation Strategy (RUS) 2005	2005	http://www.railwaysarchive.co.uk/documents/SRA_RUSWMids2005.pdf	WM2 WM3
46. West Midlands Growth Points	N/A	http://www.communities.gov.uk/housing/housingsupply/growthareas/newgrowthpoints/newgrowthpoints/we	WM4

		stmidlandsgrowth/	
47. Sustrans Information Leaflet Sheet FF36, Leading the Way in Travel Behaviour Change	N/A	http://www.sustrans.org.uk/search-results?search=Sustrans+Information+Leaflet+Sheet+FF36	WM8
48. Delivering a Sustainable Transport System: City and Regional Networks Data Book	2009	http://www.dft.gov.uk/pgr/regional/strategy/databook/	various
49. Transport Statistics Great Britain	2008 edition	http://www.dft.gov.uk/pgr/statistics/datatablespublications/tsgb/2008edition/	various
50. Transport Trends		http://www.dft.gov.uk/pgr/statistics/datatablespublications/trends/	various
51. Regional Transport Statistics:	2008 edition	http://www.dft.gov.uk/pgr/statistics/datatablespublications/regionaldata/rts/regtranstats2008	various
52. The National Travel Survey (NTS)		http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/	WM7 WM8
53. West Midlands Regional Carbon Dioxide Emissions Study	2009	http://www.wmra.gov.uk/documents/West%20Midlands%20Regional%20Carbon%20Emissions%20Study%20-%20Issue%201_2.pdf	WM7
54. West Midlands Climate Change Action Plan	2007	http://www.wmra.gov.uk/Climate_Change.aspx	WM7
55. DEFRA Noise Mapping	N/A	http://services.defra.gov.uk/wps/portal/noise	WM9
56. UK Air Quality Archive	N/A	http://www.airquality.co.uk/laqm/laqm.php	WM9
57. West Midlands Regional Spatial Strategy Annual Monitoring Report	2008	http://www.wmra.gov.uk/Planning_and_Regional_Spatial_Strategy/Monitoring_/Monitoring.aspx	WM1 WM7 WM8 WM11
58. West Midlands Health and Wellbeing Strategy	2008	http://www.wmra.gov.uk/Health/Regional_Health_Partnership_-_Reports_and_Publications.aspx	WM9
59. Barriers to Travel, Passenger Focus and ATCO	2009	http://www.passengerfocus.org.uk/	WM2 WM3 WM8
60. Perceptions towards Integrated Transport, Passenger Focus and ATCO	2009	http://www.passengerfocus.org.uk/	WM2 WM3 WM8
61. Delivering a Sustainable Railway	2007	http://www.dft.gov.uk/about/strategy/whitepapers/whitepapercm7176/	WM2 WM3

Appendix C – Review of evidence

Table C.1 – Review of strength of current evidence for the twelve travel challenges

Travel Challenges	DaSTS goals					Review of existing evidence	
	Economy	Climate change	Safety and health	Equality	Quality of Life & env't	Quality of existing evidence	Comments / sources of evidence
Addressing the impacts of road congestion, particularly on freight and business travel (WM1) .	✓					Good. Local gaps in evidence.	AWM studies, HA, PRISM, TIF, CJAMS data, DfT databook. Limited evidence in rural areas, some towns. Datasets are all consistent in identifying the same areas as hotspots.
Improving the ability of the rail network to meet the needs of travellers and freight movements (WM2) .	✓	✓				Freight OK, gaps for business travel	RUS. Some gaps in understanding of journey purpose for passenger movements.
Improving the ability of the public transport network (rail, bus, Metro) to cater for travel, especially to work (WM3) .	✓	✓		✓		Good.	RUS, LTPs, Accession analysis. Gaps in understanding journey needs of different users.
Addressing the demand for travel resulting from new development, both employment and housing (WM4) .	✓	✓			✓	Reasonable. Potential uncertainty with RSS forecasts and implications.	HA RSS study, PRISM. But limited consideration to date of implications of different potential growth scenarios.
Overcoming the gaps in capacity and quality of the strategic transport gateways and corridors to/from Birmingham (WM5) .	✓				✓	BIA OK, evidence for rail network is being developed.	RTPAP, WM & Chilterns RUS (ongoing work).
Identifying the causes of, and planning for, non-recurrent delays on the transport networks (WM6) .	✓				✓	Evidence gap for road, some data available for rail.	HA RIU collates intelligence on causes of data on non-recurrent delay, but delay is not quantified. No data collected by local transport authorities. Data currently being collated for WM & Chilterns RUS.
Reducing the need for travel (WM7) .		✓			✓	Reasonable.	CO2 maps by district in databook and analysis of density of people and jobs. Suggests that the greatest potential to reduce the need to travel is in those areas with the highest densities of jobs and people.
Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8) .		✓	✓	✓	✓	Reasonable. National evidence and Worcester case study, pilots in Coventry and Wolverhampton.	National evidence on smarter choices, evidence from Worcester. Smarter Choices pilot projects also undertaken in Coventry and Wolverhampton.
Reducing traffic (especially HGVs) and/or mitigating its effects, in sensitive areas (WM9) .	✓		✓	✓	✓	Reasonable.	DEFRA: air quality mapping available. Scope of noise mapping is limited.
Minimising the impacts of new transport infrastructure and travel on the natural environment (WM10) .					✓	Good.	RSS: mapping of landscape and biodiversity. Evidence is clear and unambiguous.
Improving public and community transport accessibility and affordability in urban and rural areas (WM11) .	✓			✓	✓	Accessibility good, limited evidence on affordability.	LTPs, Accessibility Plans, Accession analysis.
Identifying measures to reduce further the number of deaths and injury accidents on roads (WM12) .			✓			Good.	KSI data in databook. Evidence is clear and unambiguous.

Note:

- ✓ (large tick mark): signifies primary relationship.
- ✓ (small tick mark): signifies secondary relationship.

Colour coding indicates the quality of existing evidence, as follows:





-  Green indicates extensive, good quality evidence.
-  Yellow indicates reasonable evidence, although with some potential areas of uncertainty.
-  Amber indicates some evidence, but significant evidence gaps in relation to important issues.
-  Red indicates significant gaps in the current evidence base, meaning that it is not possible to assess in any way the scale of the travel challenge.





Table C.2 – Review of evidence to identify priorities for study under the twelve travel challenges

Travel Challenges	DaSTS goals					Strength of Issues from evidence base				Priorities for study	
	Economy	Climate change	Safety and health	Equality	Quality of Life & env't	Quality of existing evidence	Significance of issue	Scale of problem / issue	Region-wide issue?	Priority for study at regional level	Areas for consideration in future study
Throughout this matrix, Red signifies high priority for study Amber signifies medium priority for study Green signifies low priority for study.											
Addressing the impacts of road congestion, particularly on freight and business travel (WM1) .	✓					Good	Major	Large	Urban areas	High	Little new evidence is needed on congestion. Gap is in knowing how to tackle the problem, where & when .
Improving the ability of the rail network to meet the needs of travellers and freight movements (WM2) .	✓	✓				Mixed	Medium	Medium	Corridors	Medium	Need to address gaps in evidence on connectivity for business travel.
Improving the ability of the public transport network (rail, bus, Metro) to cater for travel, especially to work (WM3) .	✓	✓		✓		Good	Major	Large	Urban areas	High	Current evidence is good, but major challenges in addressing problems.
Addressing the demand for travel resulting from new development, both employment and housing (WM4) .	✓	✓			✓	OK	Major	Large	Urban areas	High	Need to understand how to cater for new employment & housing, whilst maximising future travel choice and minimising carbon.
Overcoming the gaps in capacity and quality of the strategic transport gateways and corridors to/from Birmingham (WM5) .	✓				✓	Mixed	Major	Large	Yes: gateway	High	Need evidence on connectivity to BIA and New St. Consider interface with national Access to B'ham study.
Identifying the causes of, and planning for, non-recurrent delays on the transport networks (WM6) .	✓				✓	Mixed	Medium	Medium	Corridors	Medium	Regional evidence is currently limited but can be developed further.
Reducing the need for travel (WM7) .		✓			✓	OK	Major	Large	Urban areas	High	Spatial planning: co-location of activity. Regional co-ordination required.
Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8) .		✓	✓	✓	✓	OK	Major	Large	Urban areas (localised)	High	Regional leadership needed, although issues require local intelligence from LTAs.
Reducing traffic (especially HGVs) and/or mitigating its effects, in sensitive areas (WM9) .	✓		✓	✓	✓	Ok	Medium	Medium	Localised	Low	LTAs to address – issues are local and require local intelligence.
Minimising the impacts of new transport infrastructure and travel on the natural environment (WM10) .					✓	Good	Minor	Minor (indirect)	Highly localised	Low	Issue to be addressed for specific schemes.
Improving public and community transport accessibility and affordability in urban and rural areas (WM11) .	✓			✓	✓	Mixed	Medium	Medium	Localised	Low	LTAs best understand issues in their areas, which should be captured in Community Strategies.
Identifying measures to reduce further the number of deaths and injury accidents on roads (WM12) .			✓			Good	Medium	Medium	Localised	Low	LTAs best understand road safety issues in their areas.




Note:

- ✓ (large tick mark): signifies primary relationship.
- ✓ (small tick mark): signifies secondary relationship.




Colour coding of the 'evidence' column:

-  Green indicates extensive, good quality evidence.
-  Yellow indicates reasonable evidence, although with some potential areas of uncertainty.
-  Amber indicates some evidence, but significant evidence gaps in relation to important issues.
-  Red indicates significant gaps in the current evidence base, meaning that it is not possible to assess in any way the scale of the travel challenge.





Colour coding of the 'significance' column:

-  Green indicates that the challenge is of generally minor significance to the region.
-  Amber indicates that the challenge is of medium significance to the region, based on the evidence that we have available.
-  Red indicates that the challenge is of major significance to the region, based on the evidence that we have available.

Colour coding of the 'scale' column:

-  Green indicates that the challenge is of a minor scale in the region.
-  Amber indicates that the challenge is of a medium scale in the region.
-  Red indicates that the challenge is of large scale in the region.

Colour coding of the 'geographical coverage' column:

-  Green indicates that the challenge tends to be highly localised to particular parts of the region.
-  Yellow indicates that the challenge tends to be localised within the region.
-  Amber indicates that the challenge is focused in urban areas and on key corridors.
-  Red indicates that the challenge is of strategic importance to the whole region.

Colour coding of the 'priority for study at the regional level' column:




-  Green indicates that, following review of the current evidence and the scale of the challenge, the challenge is a low priority for study by the region.
-  Amber indicates that, following review of the current evidence and the scale of the challenge, the challenge is a medium priority for study by the region.
-  Red indicates that, following review of the current evidence and the scale of the challenge, the challenge is a high priority for study by the region.

Table C.3 – Geographical priorities for study and interface with national studies

Travel Challenges	DaSTS goals					Reg. priorities		Priorities for study in sub-regions							Priorities for consideration through national studies								
	Economy	Climate change	Safety and health	Equality	Quality of Life & env't	Quality of existing evidence	Priority for study at regional level	B'ham & Solihull	Cov. & Warks.	Black Country	Staffs + Stoke	Shrops + Telford	Herefordshire	Worcestershire	Access to B'ham	London to North	HGV accidents	Freight use of rail ntwk	Int demand Manage't	Smarter Choices	Access to Manchester	Access to Heathrow	
Throughout this matrix, Red signifies high priority for study Amber signifies medium priority for study Green signifies low priority for study.																							
Highlighted blocks in the matrix show links between regional priorities and planned national studies.																							
Addressing the impacts of road congestion, particularly on freight and business travel (WM1).	✓					Good	High																
Improving the ability of the rail network to meet the needs of travellers and freight movements (WM2).	✓	✓				Mixed	Med																
Improving the ability of the public transport network (rail, bus, Metro) to cater for travel, especially to work (WM3).	✓	✓		✓		Good	High																
Addressing the demand for travel resulting from new development, both employment and housing (WM4).	✓	✓			✓	OK	High				To be considered in future studies												
Overcoming the gaps in capacity and quality of the strategic transport gateways and corridors to/from Birmingham (WM5).	✓				✓	Mixed	High																
Identifying the causes of, and planning for, non-recurrent delays on the transport networks (WM6).	✓				✓	Mixed	Med																
Reducing the need for travel (WM7).		✓			✓	OK	High																
Overcoming the barriers to use of sustainable travel modes, including walking & cycling, where these are viable options for travel (WM8).		✓	✓	✓	✓	OK	High																
Reducing traffic (especially HGVs) and/or mitigating its effects, in sensitive areas (WM9).	✓		✓	✓	✓	OK	Low																
Minimising the impacts of new transport infrastructure and travel on the natural environment (WM10).					✓	Good	Low																
Improving public and community transport accessibility and affordability in urban and rural areas (WM11).	✓			✓	✓	Mixed	Low																
Identifying measures to reduce further the number of deaths and injury accidents on roads (WM12).			✓			Good	Low																
Geographical priorities / priority national studies	18	14	4	5	11																		

