

West of England Partnership
Joint Transport Executive Committee
2 July 2010

Developing a Sustainable Transport System (DaSTS)

Purpose of report

1. To report on the completion of the first stage of the DaSTS West of England Transport Study.

Background

2. In 2007, in response to the Eddington Study and the Stern Review, the Department for Transport (DfT) published a new proposed approach to long-term transport planning. The DaSTS framework establishes five key goals for transport investment as follows:
 - Reduce carbon emissions
 - Support economic growth
 - Promote equality of opportunity
 - Contribute to better safety, security and health
 - Improve quality of life and a healthy natural environment
3. The DfT are funding a range of transport studies across England to help inform the formulation of area strategies consistent with the DaSTS goals, and in 2009 the DfT allocated funding to six authorities or partnership areas in the South West to undertake area studies. This funding represented an opportunity for the West of England authorities to further enhance the emerging JLTP3 and its transport major scheme programme, and the West of England study has two aims:
 - To enhance the existing (and already extensive) evidence base to take account of estimated carbon emissions, the role of transport links in facilitating accessibility and regeneration in South Bristol, and relationships between the local and strategic transport networks (particularly the motorway network).
 - Building on the above evidence base, to re-examine transport challenges facing the West of England and identify a range of transport packages for the period 2014 to 2019 to address these challenges, which build on the existing RFA programme and are compliant with the DaSTS goals, as well as considering opportunities for more affordable solutions and innovative funding sources.
4. The study has identified five high level challenges as follows:
 - Providing the economic conditions to support sustainable growth
 - Providing the level of strategic connectivity to support growth
 - Reducing the need to travel
 - Increasing use of more sustainable travel modes; and
 - Reducing carbon emissions from transport sources.

5. The study has consequently identified, and assessed the performance of, a range of transport interventions (or 'Strategy Responses') against these challenges, to a DfT-specified strategic assessment framework. These scenarios range from small scale, low cost measures including modest investment in smarter choices, walking, cycling and public transport, through higher profile public transport, rail and highway major scheme investment to more strategic interventions in the strategic motorway network. The scenarios have also taken account of their ability to reduce carbon emissions and address the transport impacts of forecast housing and employment development in the sub-region, including facilitating inward investment and regeneration. The Strategy Responses have then been grouped into 'Package Options' to assess affordability with clear reference to current RFA funding allocations, and prioritised these options for further work in the next phase of the study.
6. The West of England study has a funding allocation of £200,000, with £60,000 allocated to 2009/10 (the phase of the study now completed) and the remaining £140,000 allocated to the second phase of the study scheduled for completion by December 2010. Following the completion of the first stages of the 6 regional studies, South West Councils are currently assessing which studies will progress to the next stage and a decision is expected later this year.
7. The study has been managed through a Project Board comprising officers from the four councils and representation from South West Councils, the Highways Agency (HA) and the Government Office for the South West. Progress has also been reported to a Programme Board facilitated by South West Councils and attended by representatives from the DfT.
8. The study has included the production of 'milestone' reports outlining how gaps in the evidence base on carbon reduction, South Bristol accessibility and the impacts of the strategic highway network, together with a final report drawing these matters together with initial strategy and affordability assessments. The conclusions of the studies will influence the future direction of the major scheme programme for transport investment in the region, as well as helping direct the overall strategy embedded in the new Joint Local Transport Plan (JLTP3).

Stage 1 Conclusions

9. The current stage of the West of England Study reported its findings in May 2010. A range of conclusions have been established as follows:
 - The sub-regional motorway network also carries significant local traffic volume, and any capacity restrictions on the M4/M5 (due to roadworks or an incident) have significant strategic implications. Although the 'Managed Motorway' project (involving dynamic hard shoulder running) currently being implemented by the HA has positive impacts, investment in public transport and smarter choices has substantial benefits both on the local and strategic networks.
 - Whilst public transport accessibility in South Bristol (in terms of the coverage of the local bus network) is relatively good, certain more deprived areas in South Bristol are less well served, and access to job opportunities is affected by the skills balance and type of employment locally available, together with poorer access to areas such as the North Fringe. Improving highway and public transport links to the

area is also critical in providing a level of accessibility that will attract inward investment.

- The study has assessed existing estimates of carbon reduction at the national and local level, and has forecast the impact of national, motorway, smarter choices and programmed local transport investment on carbon emissions in the sub-region. The study concludes that the combination of existing national and local initiatives, together with projected major scheme investment, will reduce transport carbon emissions by 16% by 2020 compared with 2006 levels, assuming forecast traffic growth levels occur. This highlights the difficulty in meeting more ambitious targets with existing and programmed resources in the transport sector. The study has also highlighted the significant, off-setting impact of forecast traffic growth in progressing towards the target; without this growth transport carbon emissions could reduce by nearly 30% over the West of England urban area (and by nearly 35% within Bristol).
- In terms of investment scenarios, the study concludes that small scale transport interventions alone will not achieve sufficient progress towards carbon reduction and the accommodation of forecast growth and regeneration. Overall, the study has re-affirmed that 'affordable' scenarios to deliver progress towards carbon reduction and sustainably accommodate future growth are broadly consistent at a strategic level with the investment levels already incorporated within the Regional Funding Allocation, emphasising the need to invest in a combination of rapid transit, highway and strategic public transport improvements as well as smarter choices.
- The study has also considered at a strategic level the impact of a range of potential cuts (10%, 30% and 50%) in funding for transport schemes. It has concluded that whilst a 10% cut in funding would still be likely to enable delivery of a substantial proportion of necessary transport interventions, it would be expected to begin to limit the sub-region's ability to address the transport implications of forecast housing and employment development. A 30% cut would have a very substantial impact on the delivery of transport interventions, such that the ability of the sub-region to significantly reduce carbon emissions, and the ability to facilitate growth and regeneration in South Bristol and Weston-super-Mare would be significantly constrained. A 50% cut would have even further implications and the performance of the sub-region's transport network would be substantially damaged, with serious implications for economic growth and the likelihood of no reduction in carbon emissions.

Phase 2 of the Study

10. Overall, it should be noted that these conclusions are inherently strategic in nature, with more detailed consideration of strategy options to follow in the main stage of the study to follow. The key areas of work to be undertaken up to the end of 2010, should funding for the next phase of the study be forthcoming, will include the following:

- Further refinement of the package options and to confirm an investment programme up to 2018/19 in conjunction with the delivery of existing major schemes and the new JLTP, and including more detailed comparison with lower cost alternatives;
- Developing further evidence to confirm a carbon trajectory for reducing emissions from transport sources;

- Further consideration of potential funding scenarios at a scheme level; and
- Developing elements of a longer term, post 2018/09 programme.

11. A decision on which studies in the South West, including the West of England study, is expected through South West Councils later this year. If the funding is forthcoming, the timescale for the decision may also result in the study programme extending beyond December 2010.

Consultation

12. In addition to comments received from Project Board representatives, study progress and conclusions have been reported to the Transport Plan Commission in March and June 2010, which includes representatives from GWE Business West, the Joint Local Access Forum, Passenger Focus, Bristol PCT, Wessex Connect, Sustrans and the University of the West of England. Further, detailed comments on the study findings have also been received from the Department for Transport, which have been taken account of in the setting out of work areas for the next stage of the study.

Environmental Impact Assessment

13. The conclusions from the DaSTS study are feeding into the formulation of the JLTP3 which includes a Strategic Environmental Assessment.

Recommendation

That Members note the progress made with the DaSTS West of England Transport Study.

Appendices

Appendix One: West of England DaSTS Study – Executive Summary

Supporting Documents

West of England DaSTS Study - Network Performance Assessment April 2010
 DaSTS Regional Study – West of England Partnership - Increasing Social Inclusion and Supporting Regeneration in South Bristol April 2010
 West of England DaSTS Study – Carbon Impact Assessment April 2010
 West of England DaSTS Study – Final Report May 2010

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Appendix One

West of England DaSTS Study

Final Report – Executive Summary

May 2010

Notice

This document and its contents have been prepared and are intended solely for the West of England Partnership and use in relation to the West of England DaSTS Study.

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Executive Summary

Introduction

This document presents the **Interim Report** of the study to review and further develop the West of England's (WoE's) transport strategy. This forms Phase 1 of the **WoE Transport Study** that was identified by the South West region in its submission to the Department for Transport (DfT) on regional priorities under the Department's **Delivering a Sustainable Transport System (DaSTS)** programme. The DfT has confirmed the importance of the study to the region and is contributing to funding the study.

The DaSTS Process

DaSTS represents the Government's response to the findings of research into the links between transport and economic productivity and the potential impacts of climate change. DaSTS establishes **five goals for transport** investment as:

- to support economic growth;
- tackling climate change;
- better safety, security and health;
- greater equality of opportunity and;
- improved quality of life and a healthy natural environment.

In 2009 the Department invited the regions to identify the challenges to achieving these goals, and potential solutions. In a first stage each region identified how the goals and challenges manifested themselves locally and identified work programmes to better understand the challenges and identify a programme of transport investment to overcome them. This study represents one element of the regional work programme.

DaSTS represents a subtle shift in emphasis in several ways including:

- interventions should be identified from a 'first principles' understanding of the problems, objectives, and opportunities;
- greater emphasis on behavioural change, revenue-funded solutions, making better use of existing networks and on affordability and deliverability of options; and
- recognition that some of the solutions may lie outside of transport.

Delivering Growth in the West of England

The WoE is the economic powerhouse of the South West region, generating over a quarter of the region's output in terms of Gross Value Added (GVA) and has a long history of growth and success in adjusting to changing economic circumstances. The sub-region benefits from a strategic location and a competitive economy with a large and skilled workforce; and it is well placed to recover from the recession and contribute significantly to the prosperity of the wider South West Region. The sub-region has an important role to play in delivering growth and contributing to regional targets.

Transport's contribution to meeting the UK Climate Change Act target of an 80% cut in greenhouse gases (by 2050 on 1990 levels) is not yet clear, but the expectation is that absolute reductions in CO₂ from transport should be delivered, potentially up to a 25% reduction by 2020. Estimates of the change in CO₂ emissions from transport in the sub-region shows that while vehicle kilometres between 2006 and 2020 are forecast to increase by around 30%, CO₂ emissions from transport are forecast to reduce by 1%. The projections indicate that while CO₂ intensity will reduce, due to the impact of improved technology as the vehicle fleet becomes more efficient, the reduction in CO₂ due to travel in the sub-region is small due to the impact of growth in travel demand.

Delivering this growth sustainably and successfully will be a challenge. This Spring the sub-region set out its plans in the **Joint Delivery and Infrastructure Investment Plan (DIIP)**, based on the ‘Single Conversation’ with the Homes and Communities Agency (HCA) and building on the Multi-Area Agreement (MAA) negotiated with government, identifying priorities and themes for investment in support of growth and development.

Transport has a key role to play in enabling this growth: providing the connectivity needed to enable major sites to be developed; and, by providing the level and quality of connectivity within and to/from the sub-region to enable it to function efficiently, make it attractive for inward investment.

A range of studies and processes have consistently identified the increasingly severe problems of highway network congestion as a major barrier to achieving sustainable growth. The WoE’s four local authorities have jointly tackled this by developing a carefully evidence-based and forward-thinking transport strategy, initially set out in their **Joint Local Transport Plan (JLTP) 2006-2011**. The strategy comprises a set of complementary major transport schemes – with public transport and highway interventions - supporting the growth and regeneration priorities now set out in the DIIP and addressing some of the sub-region’s most severe congestion problems.

The importance of these major schemes to delivering regional as well as sub-regional objectives is evidenced by their inclusion as priorities for delivery within the 2nd Regional Funding Allocation (RFA2) programme. One of these schemes, the Greater Bristol Bus Network (GBBN) is being delivered; the others are at various stages of progression through planning and funding approval processes.

The West of England Transport Study

The evidence base supporting the current strategy is substantial. DaSTS does, though, offer a new challenge to existing strategy and policy direction. This **Phase 1** of the WoE Transport study has: supplemented the current evidence base with new research on three topic areas where the evidence base required strengthening; re-examined the transport challenges facing the WoE; and identified a range of transport packages that could be pursued to address these challenges. This is compliant with the approach to DaSTS studies set out by the Department in its guidance to the regions. It provides the platform to develop one or more packages further in **Phase 2** which will inform decisions on the programme of transport investment priorities to be delivered in the period 2014-2019, with a less detailed programme for 2019-2024. In parallel the authorities are also currently in the process of refining the transport strategy in developing the new JLTP.

Strategic Outcomes

Objectives for WoE are defined at a national, regional and sub-regional policy level, framed by the draft RSS and encapsulated in the emerging post-2011 JLTP and the recent DIIP. This policy framework, with the DfT Goals, has enabled the study to define the **Strategic Outcomes** that the region and the sub-region are seeking to achieve, shown in Table E.1.

Table E.1 – Summary of Strategic Outcomes

DfT Goals	WoE Strategic Outcomes
To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change	Reduce carbon emissions from transport sources by 34% by 2020 from the 1990 baseline
	Reduced intensity of travel (less travel per unit of population or economy)
	Increased proportion of travel made by sustainable modes
	Minimise waste produced and resources consumed by transport sector
To support national economic competitiveness and growth , by delivering reliable and efficient transport networks	Net Increase in WoE employment of 95,550 jobs by 2026 from 2006
	Net increase in WoE housing by 85,082 by 2026 from 2006
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	Reduce road casualty numbers by 10% by 2020 (2004-08 base)
	Reduce KSI casualties by 33%
	Promote human health
To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	Improved accessibility to jobs, services learning and health
	Reduced deprivation levels
	Improve social inclusion
To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment	Improve social inclusion in areas of low accessibility
	Minimise the amount of development on previously undeveloped land
	Restore/retain/enhance key environmental, landscape and wildlife assets
	Improve transport choice

Defining Challenges

A review of the evidence base has identified the key challenges to delivering the Strategic Outcomes defined above in delivering sustainable growth in the sub-region. Five high-level **Challenges** have been identified – cross-referenced with those identified for the emerging JLTP - and used to inform the generation of possible interventions.

Providing the Economic Conditions to Support Sustainable Growth in WoE

- Avoiding **short-term imbalances in housing and job locations**;
- Enabling **growth in the WoE priority economic sectors**;
- Reducing constraints on the **availability and development of key sites**;
- Increasing **access to employment opportunities** and **increasing social inclusion** in the priority regeneration areas;

Providing the level of strategic connectivity to support growth in WoE

- Enabling **strategic connectivity to the WoE urban area to the Strategic Road Network**, especially the major employment and priority development and regeneration area;
- Providing **sufficient bus and rail services and capacity** to meet the strategic connectivity needs of the priority development and regeneration areas;

Reducing the need for travel within WoE

- Reducing the number of trips travelling to, from and within the WoE urban area by improving the balance between population and jobs and services and providing alternatives to making journeys;

Increasing use of more sustainable modes of travel within WoE

- Increasing the **opportunity to make use of more sustainable modes**;
- Improving the relative **attractiveness of more sustainable modes**;

Reducing Carbon Emissions from Transport Sources in WoE

- Reducing currently high levels of car use by **providing for and encouraging greater use of sustainable modes for intra-WoE and intra-regional movements**.
- **Reducing the need for travel** by increased self containment within the WoE urban areas.

Options to Address the Challenges

Phase 1 of this study has developed a set of interventions to address the Challenges; termed **Strategy Responses**. The WoE needs to achieve a step change in both growth and the how that growth is delivered; and thereby how transport is provided for. This is key to the approach to the development of the Strategy Responses and a wide range of possible interventions – including non-transport measures – were considered. The Strategy Responses identified are as follows:

- **Strategy Response 1 – Non-Transport Measures and Local Demand Management**, including smarter choices measures and increased parking controls and highway capacity reallocation to other modes within central Bristol and Bath, planning controls and non-transport measures to increase the level of self-containment of activity in the priority growth and regeneration areas;
- **Strategy Response 2 – Enhanced Smarter Choices** - this is a programme of schemes to encourage walking and cycling plus other, non-engineering, incentives to use public transport;
- **Strategy Response 3 – Improved Intra-WoE Public Transport Offer - focused on Rapid Transit** - providing a step-change in the quality of public transport to, from and between the priority development and regeneration areas. This includes schemes already presented for funding approval: Ashton Vale – Bristol City Centre, the North Fringe to Hengrove Package, South Bristol Link, Bath Package, and Weston Package, all building on the existing GBBN scheme.
- **Strategy Response 4 – Improved Inter-Regional Public Transport Connectivity** providing increased rail frequencies and faster direct services – Bristol Metro - supported by strengthened inter-urban bus services and improved bus-rail interchange;
- **Strategy Response 5 – Improved Highway connectivity** - through the highway elements of the South Bristol Link plus the Callington Road Link and new highway links to support development and connectivity in the North and East Fringe of Bristol and at Weston-super-Mare;
- **Strategy Response 6 – Managing the Capacity and Resilience of WoE’s Strategic Road Network** improving performance by managing demand and prioritising use, extending the principles of the M4/M5 managed motorway to other key sections of the M4 and M5 around the WoE and extending these principles onto other parts of the WoE transport network, such as the Avon Ring Road (Integrated Demand Management).
- **Strategy Response 7 – Enhanced Demand Management** – in the form of road user charging and/or Workplace Parking Levy Charging, with other fiscal measures to discourage car use with the income to be invested to build on / enhance the schemes described in the other Strategy Responses.

Table E.2 identifies how each of these Strategy Responses could address the WoE’s priority place-based Challenges.

Table E.2 - Strategy Responses and Transport-Related Challenges by WoE Priority Area

Development/ Regeneration Area	Priority Challenges for Delivering Growth	Non- Transport Measures and Local Demand Mgt	Enhanced Smarter Choices	Improved Intra-WoE Public Transport Offer - focussed on RT	Improved Inter- Regional Public Transport Connectivity	Improved Highway connectivity	Managing the Capacity and Resilience of WoE's SRN	Enhanced Demand Managemen t
Bath and Bath City Centre	Providing connectivity of Bath Western Riverside Development to city centre	✓	✓	✓✓✓	✓	0	0	✓
	Increasing supply of affordable housing to ensure balance between housing growth and jobs growth within Bath	✓✓	✓	✓	✓	0	0	0
	Improving connectivity of Keynsham and Salford to Bath city centre	0	0	✓✓	✓	✓	0	0
	Providing strategic connectivity to major employment areas in Bristol and South Gloucestershire	0	0	✓✓✓	✓✓✓	✓✓	✓✓✓	✓
Bristol Central Area	Improving local access to the city centre by non-car mode	✓✓	✓✓✓	✓✓✓	✓✓✓	✓	✓	✓✓✓
	Improving strategic connectivity of the city centre for inter-regional movements	0	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓
	Improving the city centre urban environment	✓✓	✓✓	✓✓✓	✓	✓	✓	✓✓✓
Temple Meads/St Phillips/Stokes Croft/Dove Lane	Providing improved local public transport services and highway connectivity to development sites	✓	✓	✓✓✓	✓✓	0	0	✓✓
North and East Fringe	Providing improved public transport connectivity to major employment and housing sites	0	0	✓✓✓	✓✓	✓✓	0	✓
	Manage congestion and improve journey time reliability on the local highway network to support new housing and employment growth	0	0	✓	✓	✓✓✓	✓✓	✓✓

Development/Regeneration Area	Priority Challenges for Delivering Growth	Non-Transport Measures and Local Demand Mgt	Enhanced Smarter Choices	Improved Intra-WoE Public Transport Offer - focussed on RT	Improved Inter-Regional Public Transport Connectivity	Improved Highway connectivity	Managing the Capacity and Resilience of WoE's SRN	Enhanced Demand Management
	Manage congestion and improve journey time reliability on the strategic road network to provide high quality connectivity of major employment sites to the regional and national networks and to international gateways	0	0	0	✓	✓✓	✓✓✓	✓
	Ensuring balance between housing growth and jobs growth	✓✓	✓	✓✓	0	✓	✓	0
South Bristol	Providing substantially improved public transport connectivity to/from other parts of the WoE urban area	✓✓	✓✓	✓✓✓	✓✓	✓✓	✓	✓
	Provide improved highway network connectivity of to the WoE strategic road network.	0	0	0	0	✓✓✓	✓✓✓	✓✓
	Ensuring balance between housing growth and jobs growth	✓✓	✓	✓✓	0	✓✓	✓✓	0
North Bristol	Providing improved public transport connectivity to/from other parts of the WoE urban area	✓✓	✓✓	✓	✓	✓	0	✓
Weston-super-Mare	Providing improved public transport connectivity to/from other parts of the WoE urban area – particularly Bristol city centre and the North Fringe	0	✓	✓✓✓	✓✓✓	✓	✓	0
	Provide improved highway network connectivity of to the WoE strategic road network.	0	0	0	✓	✓✓✓	✓✓✓	0
	Ensuring balance between housing growth and jobs growth	✓✓	✓	✓✓	0	✓	✓	0

KEY 0 - Low impact; ✓ – Medium impact; ✓✓ High impact; ✓✓✓ Critical Success Factor

Package Options

Strategy Responses have been combined into illustrative **package options**; guided by the extent to which responses meet the Challenges. Six package options, which could be taken forward by the sub-region, have been identified and are shown in Table E.3. The packages build up incrementally from Option A by adding an additional Strategy Response.

The key characteristics and rationale for each package option are as follows:

- **Package Option A** - comprises only those measures in Strategy Response 1; focused generally on small scale, low cost measures aimed at changing travel behaviours and travel patterns through a mixture of smarter choice measures, measures to improve walking and cycling and public transport attractiveness, supported by local demand management measures focused on the core urban centres of Bristol and Bath;
- **Package Option B** builds upon Option A with a more comprehensive smarter choice programme aimed at delivering rapid and extensive change in travel behaviours across the sub-region. It also adds a range of interventions to substantially improve public transport largely for shorter distance intra-urban movements within the WoE. This focuses on the development of a WoE-wide rapid transit network and extended bus priority network, supported by additional park and ride capacity and reallocation of some existing highway capacity to public transport;
- **Package Option C** adds to B a range of interventions to provide improved highway network connectivity to key growth and regeneration areas – such and South Bristol Link – thereby providing a more balanced highway and public transport package;
- **Package Option D** then adds improved inter-regional public transport links, primarily focused on improving and increasing the used of rail for medium length trips to, from and within the sub-region, though also supplemented by improved strategic bus and coach service;
- **Package Option E** then adds measures to enhance the operation of the strategic highway network, through extending managed motorway principles beyond the currently programmed M4/M5 scheme to other parts of the motorway network and extending similar management principles onto the local authorities’ strategic road networks in the form of an Integrated Demand Management (IDM) scheme; and
- **Package Option F** is presented as an alternative to Option E, using demand management measures such as road pricing and workplace parking levy schemes on top of Package Option D to reduce rather than manage highway demand on the network.

Table E.3 – Make Up of Package Options

Package Option	1 – Non-Transport Measures and Local Demand Management	2 - Enhanced Smarter Choices	3 – Improved Intra-WoE Public Transport Offer - focused on Rapid Transit	4 - Improved Inter-Regional Public Transport Connectivity	5 – Improved Highway Connectivity	6 – Managing the Capacity and Resilience of WoE’s Strategic Road Network	7 – Enhanced Demand Management
A	•						
B	•	•	•				
C	•	•	•		•		
D	•	•	•	•	•		
E	•	•	•	•	•	•	
F	•	•	•	•	•		•

Package Affordability

Each of the transport interventions included in the illustrative packages has been costed to enable a broad affordability assessment to be undertaken. This has considered only those parts of package options that could practically be delivered by 2018/19, as well as other schemes programmed for commencement before 2018/19, comparing the level of funding required against what the authorities consider a realistic benchmark level of capital funding going forward.

The benchmark is estimated at c£550 million in outturn prices (or c£460 million in current 2010 prices) based on the current RFA and LTP Integrated Transport Blocks. The funding benchmark in the Project Implementation Document (£375m) has been used to derive this funding benchmark and the Affordability Assessment in paragraph 14.9 onwards of the main report explains how has been done.

Estimated package capital costs range from c£15 million for Package A to c£750 million for Package E (2010 prices). The costs for each package are compared with the funding benchmark in Table E.4 enabling affordability to be judged using the R/A/G method employed in the DfT Strategic Appraisal Framework (SAF).

Table E.4 – Estimated Capital Cost of Illustrative Packages and comparison against Funding Benchmark to 2018/19

Package	£ mill 2010 prices (indicative)	Assessment against funding benchmark
A	13-17	Green
B	320-420	Green
C	380-520	Green
D	410-550	Yellow
E	640-860	Red
F	430-570	Yellow

The assessment shows that, against the funding benchmark, Packages A, B and C can be considered as broadly affordable. Clearly, if funding levels are substantially less than this benchmark then this position changes.

The packages have been developed to meet the identified challenges, so scaling back the packages by removing components is likely to mean that the challenges will not be fully addressed, and the desired strategic outcomes will not be delivered. Interventions could also be delivered over a longer period with funding delayed until post-2018/19. In any case, it is likely that some schemes from these packages would still be under construction beyond 2018/19.

The affordability assessment concentrates on capital funding. In order to secure maximum value for money the infrastructure interventions included in the packages would be expected to be, at worst, revenue neutral; thereby not placing any additional burden on the authorities. However, certain package elements, primarily those related to delivering smarter choice programmes to achieve real and lasting travel behaviour change, would require a significant level of revenue funding. This funding would be required in the short term – prior to 2018/19 – to enable travel patterns and behaviour change to make an impact. In addition, revenue funding to kick-start particular initiatives, such as public transport services, could also be required. These are issues that would need to be addressed in Phase 2 in developing the strategy further.

Conclusions

The delivery of sustainable growth in the WoE is a significant challenge because of the scale of the additional housing and employment that the sub-region will be delivering. However, the WoE's DIIP, developed in partnership with Government through the 'single conversation', sets clear place-based priorities for the infrastructure and investment – of which transport is a key component - needed to deliver growth.

Phase 1 of this DaSTS study has reviewed and challenged the role that transport has to play in enabling the sub-region's economy to continue to grow, and grow in a way that reduces carbon emissions. It has considered the very extensive evidence base already available on transport challenges in the sub-region. This has re-confirmed that rising levels of congestion across the WoE urban area will act as a major constraint in maintaining the sub-region's economic competitiveness and quality of life; a constraint that could in turn limit the delivery of growth and achieving a reduction in CO₂ emissions.

In line with the guidance to the regions from the Department, options have been generated for possible packages of interventions that could address the transport-related challenges faced by the sub-region. The option generation has been informed by new evidence that; demonstrates the opportunities of greater integration in the management and planning of the local and strategic transport networks; the importance of targeting interventions on areas and journeys where the most significant reductions in CO₂ emissions are likely to be achieved; and points to how critical improved transport connectivity is to attracting inward investment to the priority regeneration areas.

Of the package options identified, **Package Option A** supplements the 'existing' situation with a range of small scale management measures and parking controls focused on the main activity centres in the WoE urban area. It is the most deliverable and affordable but is assessed to contribute least to delivering the wider outcomes including the need to accommodate forecast housing and employment growth and regeneration objectives.

Package Options B, C and D each add on to Option A further interventions which provide improved strategic connectivity and local public transport accessibility to the place-based priority development and regeneration areas identified in the DIIP. Option C is equivalent to the investment programme in the region's RFA programme; as such both B and C are considered deliverable and affordable and, as shown in Table E.4, contribute positively to delivering the strategic outcomes.

Package Options E and F each contribute further to delivering the strategic outcomes and, the evidence base indicates, would be needed at some point in the future to maintain growth in the sub-region. However, the deliverability and affordability assessment indicates that they would be likely to form part of a longer-term investment programme.

Next Steps

The expectation has been that regional DaSTS studies would be undertaken in two phases. This, the first phase would identify the evidence base and the challenges and identify a long-list of options for further consideration. This study has sought to take the Phase 1 work further forward than originally envisaged and make stronger recommendations on the package of interventions needed to address the challenges of delivering sustainable growth in the WoE.

Based on the Phase 1 conclusions, there are key areas of work that need to be taken forward in Phase 2:

- Build upon the evidence base for the carbon impacts of different transport strategy elements to develop and confirm a challenging yet achievable trajectory for reducing carbon emissions from transport sources through transport and non-transport interventions;
- Increase understanding of focusing measures on changing travel patterns and behaviours in the core of the main urban areas and in the regeneration areas as a means of maximising the carbon reduction impact of transport investment measures;

- Focus on confirming scope, scale and synergy between interventions (in Package Options B, C and D) to confirm an investment programme to 2018/19 in conjunction with the ongoing planning and delivery of existing major schemes and the development of the new JLTP;
- The scope and role of the potential major transport schemes to be reviewed and refined to ensure they maximise the achievement of strategic outcomes and deliver best value for money, effectively taking each intervention to the equivalent of an Option Assessment Report (OAR) stage of the DfT major scheme process (if this stage has not already been reached for a major scheme already);
- The specification of the measures will be reviewed in order to confirm the appropriateness of each in order to establish whether lower cost alternatives exist that provide a better mix of value for money and scale of impact;
- Improve definition of critical dependencies between transport interventions required to support regeneration in South Bristol and Weston-super-Mare by establishing clearer outcome based links to the scope and timing of non-transport interventions and development timescales;
- Detailed consideration of alternative funding scenarios to be carried out at the intervention level, rather than the strategy level. This will analyse in greater depth the implications of possible funding cuts of 10%/30%/50% and the most appropriate programme of measures to be implemented under these scenarios;
- The phasing of development and associated transport measures needs to be further investigated through a consideration of the use of milestones and interim years;
- Refine the overall WoE transport strategy, setting a prioritised investment programme to 2018/1, with a clear overall WoE-wide business case and deliverability assessment demonstrating a clear and detailed link to the 'Single Conversation' DIIP; and
- Develop elements of a longer-term post 2018/19 programme (i.e. Options E and F) and identify more precisely when such package options would need to be considered for implementation.