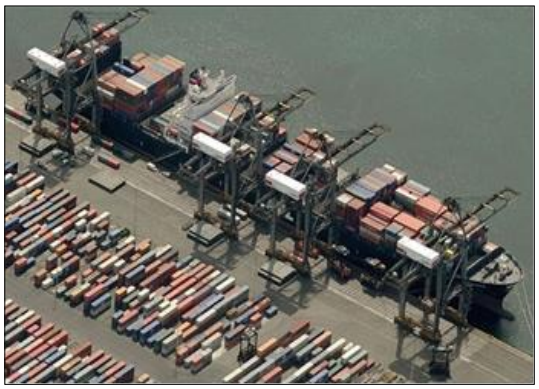
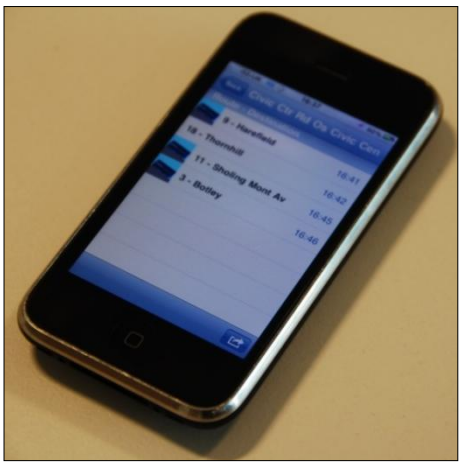
A Better Connected South Hampshire

DfT Local Sustainable Transport Fund Bid

December 2011

Volume One: The Five Business Cases





Hampshire County Council

Portsmouth City Council

Southampton City Council

Transport for South Hampshire

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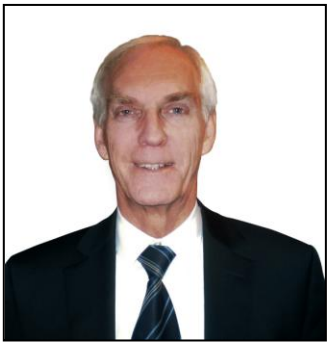
Foreword to the Business Case

It gives me great pleasure to submit this Business Case for funding through the Department for Transport's Local Sustainable Transport Fund in the Joint Large Project Package category.

The TfSH Joint Committee consists of the three local transport authorities of South Hampshire (Hampshire County Council and the two city councils of Portsmouth and Southampton) as well as the Solent Local Enterprise Partnership. Strong partnership working is central to TfSH, and the role of partners in business, academia, health, DfT, and transport operators in informing this Business Case has been important. In particular, the commitment of the South Hampshire Bus Operators Association (SHBOA) in developing proposals for a smart card and their signing of a Memorandum of Understanding is testament to the strength of partnership working on transport matters in South Hampshire.

TfSH has a track record of successful delivery and we have already put in place plans for delivery of our LSTF package.

The proposals contained within this Business Case have emerged as a result of detailed work we have been progressing over the past few years and together aim to raise the quality of public transport and active modes and offer genuine travel choice to ensure that the forecast significant growth in trips is accommodated in a sustainable way to enable the local economy to flourish.



Councillor Melville Kendal
Chairman of the TfSH Joint Committee

Councillor Melville Kendal
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01 Introduction

The three transport authorities of South Hampshire (Portsmouth City, Southampton City and Hampshire County Councils) are working together, through **Transport for South Hampshire (TfSH)**, to take a cross-boundary, area-wide approach to transport planning. TfSH is submitting this robust business case for **£17.8m** financial support from the Local Sustainable Transport Fund (LSTF).

The twin aims of our proposal are **sustainable local economic growth** and **carbon reduction**. However, the resources available are limited and so a focussed approach with tried and tested measures is proposed. Measures already working well in one area will be replicated elsewhere in a coordinated and targeted approach. Our proposed interventions address key local issues (eg accessibility to jobs especially in deprived areas, improving active modes and public transport, stimulating changes in travel behaviour) and concentrate on nine vital corridors (eg linking people to jobs and services, and binding new developments in with existing facilities and services). Our proposed interventions will generate high rates of return for comparatively little investment and require minimal ongoing revenue investment to keep them working in the future.

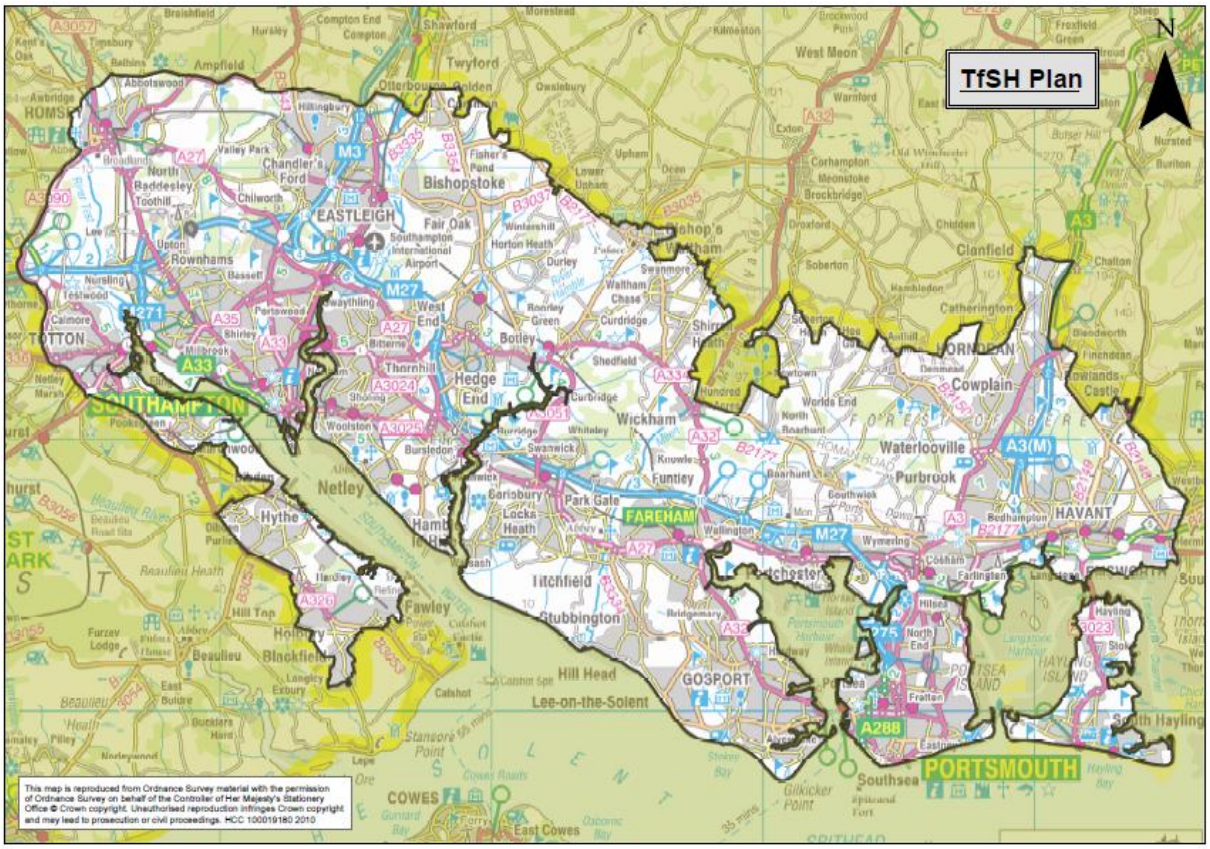


Figure 1.1: The TfSH area

The three inter-locking elements of this proposal are:

1) Low cost physical improvements along nine corridors to ensure that public transport provides a realistic, reliable and therefore attractive alternative to the private car, linking people to jobs – total cost **£16.4m:**
   - Enhancements to 16 bus, BRT and rail interchanges covering improved access, more and clearer information, cycle parking, shelters and seating
   - Improving bus journey time reliability with targeted priority measures and junction improvements
   - A step change in public transport information with 250 Real Time Passenger Information screens and ability at other bus stops to access real time information using Smartphones and through SMS text
   - Integrating public transport and active modes through cycle links and pedestrian and cycle crossings

2) Integration of public transport with an inter-operable south Hampshire smart ticketing system – total cost **£9.3m:**
   - ITSO compliant smartcard across bus and ferry services, implemented and run in partnership with South Hampshire Bus Operator Association (SHBOA)

3) A highly targeted marketing approach to achieve behavioural change targeted at the nine corridors and underpinning the other two elements by focusing on the most economically important journeys including freight and travel to work – total cost **£5.1m:**
   - Travel awareness campaigns
   - Station and interchange Travel Plans
   - Engaging residents and businesses
   - Hospital Travel Plans
   - Travel to school and college initiatives
   - Promoting Smartcard

In addition, to ensure the realisation of benefits, there will be a comprehensive monitoring and evaluation exercise undertaken by the proposed Centre for Behaviour Change - total cost **£0.3m**.

A full description of the measures on each corridor can be found in Section 2.8.3 and a description of the smartcard system in Section 2.8.2.

TfSH has a proven track-record on delivery and we have a high degree of confidence that our proposals will work. Many individual elements are already working in parts of our transport system but their application is fragmented. For example on the Shirley Road corridor in Southampton, 51% of all person movements are made by bus, taking up only 7% of road capacity. Through the tactical and highly targeted application of the interventions we aim to emulate this across the nine corridors.

On their own, the interventions are not new. However, they are rarely applied in a coordinated and targeted way across intra- and inter- local transport authority boundaries. Transport movements in south Hampshire, just like the local economy, do not respect such boundaries. Introducing an inter-operable smartcard ticketing system is a prime example of how cross-boundary and local economic benefits can be achieved.

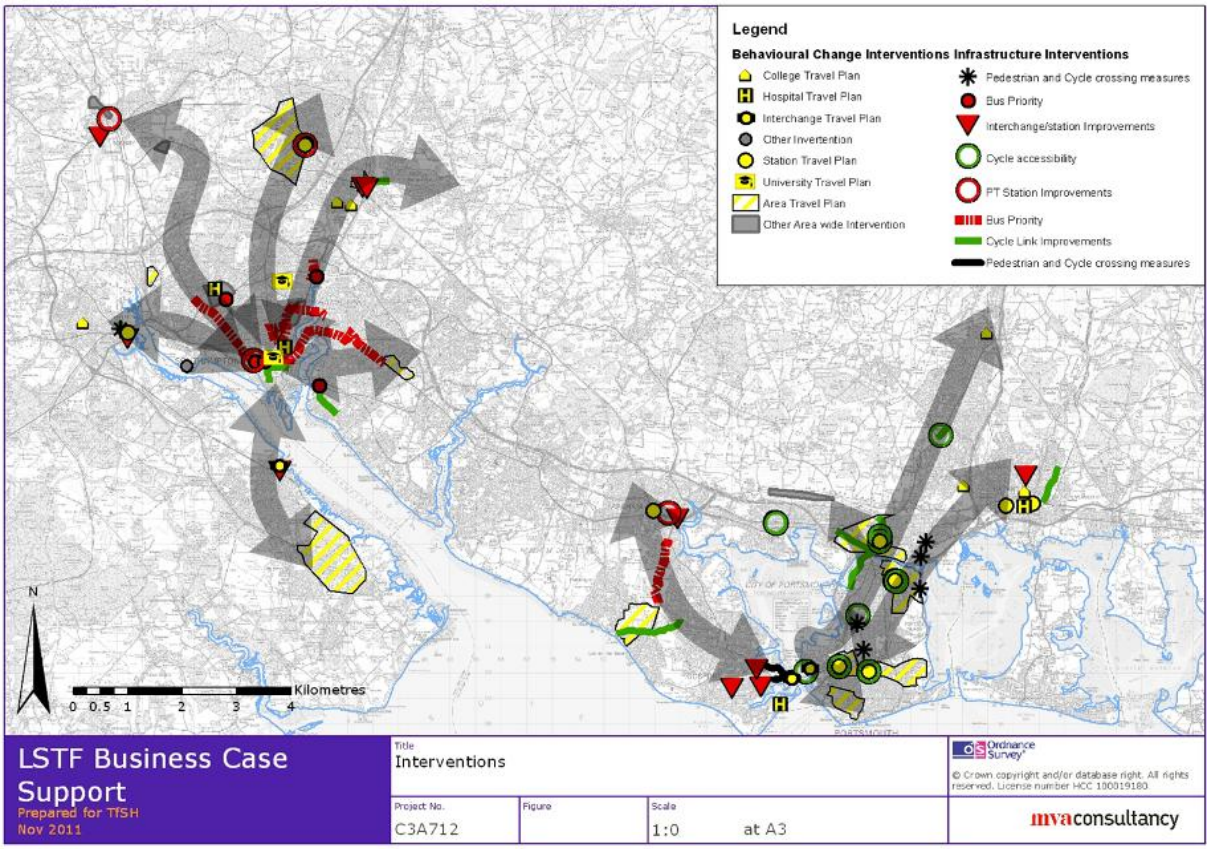


Figure 1.2: TfSH LSTF Proposals: Behavioural Change and Infrastructure Interventions

The economic and environmental problems facing urban south Hampshire are significant. South Hampshire has a dense and complex settlement pattern, and accommodates a population of over one million people in an area covering 1,848 km^2. Indeed it is the largest urbanised area in southern England, outside of London. South Hampshire reflects a functional economic area, anchored around the two cities of Portsmouth and Southampton and the M27 corridor.

Even if just existing levels of investment were maintained, there would still be a decline in the performance of the transport network, which would constrain the local economy and result in worsening carbon emissions from the transport sector. The TfSH Sub-Regional Transport Model provides an invaluable means of forecasting and evaluating changes in the transport system. It forecasts that employment growth will be constrained by -7% in 2019 and -16% in 2026, should current and future transport constraints go unmitigated.

Urban South Hampshire is important to the national economy. The ports of Southampton and Portsmouth are some of the largest in the UK - the port of Southampton handles just under half of all container trade with the far east, and is the largest car exporter and cruise port in the UK. Southampton International Airport performs a vital role for the area. If the problems of increased congestion around the ports are left unchecked then amongst other serious impacts, exports and imports will experience higher costs of transport.

We have considered many solutions to the identified problems and engaged widely with the stakeholder community including business, the Solent Local Enterprise

Partnership (LEP), public transport operators, academia, and the health sector. Across the stakeholder community there is a pragmatic view that we need to change travel habits and migrate to a more sustainable transport system. There is acceptance of a sequential approach of firstly reducing the need to travel especially by car and secondly, managing travel movements and transport networks better. Only then should we consider higher-cost strategic investment interventions.

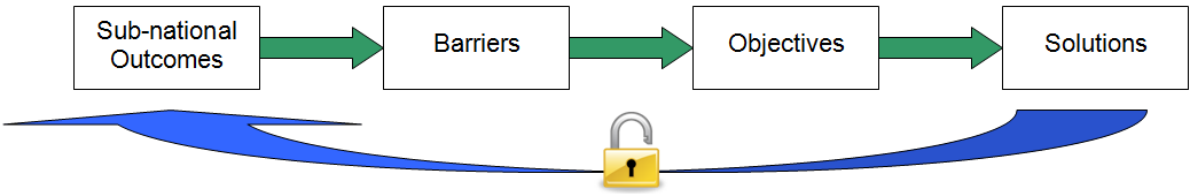
Our package of interventions addresses the first two actions and our detailed assessment of options, now backed up by a high quality evidence base, shows our final proposals to be the cost-effective way of achieving our core objectives of economic growth and carbon reduction. We believe our approach is capable of being replicated in other areas and our monitoring plan will provide the necessary evidence.

Our **bid document** has been written to comply with the LSTF Supplementary Guidance for Local Authorities Shortlisted for Large Projects (2011) and other guidance and advice from the LSTF team at the Department for Transport (for which we are very grateful). It presents our bid for LSTF funding entirely within the **Five Cases** – Strategic, Economic, Commercial, Financial and Management. Our proposals cover three inter-locking strands, of which the majority are applied to nine key corridors with the others being area-wide. This approach requires detailed evaluation and justification and we have taken the space in the **Strategic Case** to explain the process and findings. Our **Economic Case** contains the essential appraisal information with the extensive background material on the SRTM contained in Appendices. The **Commercial Case** is the required three pages and gives confidence in our ability to deliver. The **Financial Case** is also concise with additional material in Appendices. Our **Management Case** explains how the interventions will be managed and monitored with graphical material for ease of presentation and understanding.

2.0 Strategic Case

2.1 Introduction

This chapter presents the Strategic Case for investment in local sustainable transport measures in South Hampshire. The aim of this chapter is to describe a logical progression from problems to solutions. Our transport problems (or barriers, as we term them) are those transport barriers that impede progress toward five sub-national outcomes. These outcomes are wider than transport and represent the things we want to happen in South Hampshire, and as such, contextualise the barriers. The barriers enable generation of targeted objectives to guide optioneering and, ultimately, the proposals we present herein. The logic chain is presented below:



The transport network is firstly presented to provide an overview of supply-side transport provision. This is followed by a review of the local economic, environmental and social context, within which our proposals are set and against which our proposals seek to respond.

Our LSTF proposals form part of a wider programme of transport investment that is being developed to respond to the transport barriers in South Hampshire. This will result in a delivery plan for the area – known as the Long Term Strategic Implementation Plan (LTSIP). The process involved in developing the LTSIP is briefly described, as well as how it frames our LSTF proposals.

Evidence of the current and future transport situation is then presented. This draws on evidence from our Sub-Regional Transport Model (SRTM), which has only become available subsequent to the submission of our *Initial Proposal*. The future transport situation represents a *do nothing* scenario, other than those schemes that are currently committed.

Having described the local non-transport characteristics and ambitions as well as the current and future transport situation, the transport barriers that emerge are then presented. The identification of barriers enables objectives to be identified and presented.

The process involved in developing the *Initial Proposal* is then explained, followed by the refinements made for the development of the proposals contained within this Business Case. An improved evidence base, additional time to better target interventions, as well as a need to respond to the changing local economic landscape has resulted in improved targeting and alignment of our proposals.

A detailed description of our proposals then follows. These have emerged in response to the evidenced transport barriers that are inhibiting progress towards the sub-national outcomes. Our proposals can be summarised as:

- An interoperable smart ticket for bus and ferry travel
- Area-wide and corridor specific behavioural change interventions
- Physical interventions along nine corridors and at interchanges.

The area-wide proposals (smart ticketing and behavioural change interventions) are first presented, followed by a detailed description of the interventions to be deployed along each of our nine targeted corridors, including how the interventions are mutually supportive and seek to maximise the benefits of recent and planned investment. The performance of our interventions against the barriers and objectives is assessed. Case studies are then presented identifying where our proposals have worked well elsewhere.

Finally, the performance of our package against the local objectives and the LSTF assessment criteria is then assessed. This loops our proposals back to the problems we are seeking to solve, drawing on headline evidence from the Economic Case.

Partnerships are a key element of our proposals, and are referred to throughout. Partner involvement has included advice, commitment to deliver and embrace proposals, as well as financial commitment to particular components.

2.2 Area Characteristics

Section 2.2 Headlines

- South Hampshire is the most urbanised and populous area in the South East of England (outside London)
- Three international gateways performing a local and national economic and strategic function
- Population, transport networks and settlement pattern strongly influenced by the coastal geography
- M27 caters for strategic movements as well performing an important local distributor role

- The sub-national economy is dominated by the two cities of Southampton and Portsmouth
- The two cities are underperforming in comparison to wider South East
- Recession has hit South Hampshire hard, particularly the city and town centres

- Southampton, Portsmouth and Gosport stand out as having particularly acute problems across a range of measures, with significant pockets of deprivation, economic inactivity and health problems

- Change in the macroeconomic situation has reduced the scale of likely future growth in South Hampshire
- In response, the Economic Development Strategy for the area has identified a preferred growth scenario to realise 56,300 new jobs in South Hampshire by 2026
- To achieve this there is a need to focus on sectoral strengths, maximising use of our assets (international gateways and existing transport infrastructure), and enable our cities to fulfil their economic potential
- Particular opportunities exist around a number of key sectors that tend to locate in our cities, as well as at the Enterprise Zone at Daedalus
- Key period of effort needs to be from 2011 to 2015, to increase the GVA growth rate, and set South Hampshire on a preferred growth trajectory

- There is a strong track record of partnership working in South Hampshire across spatial, economic and transport planning

This section examines the South Hampshire context by describing the following:

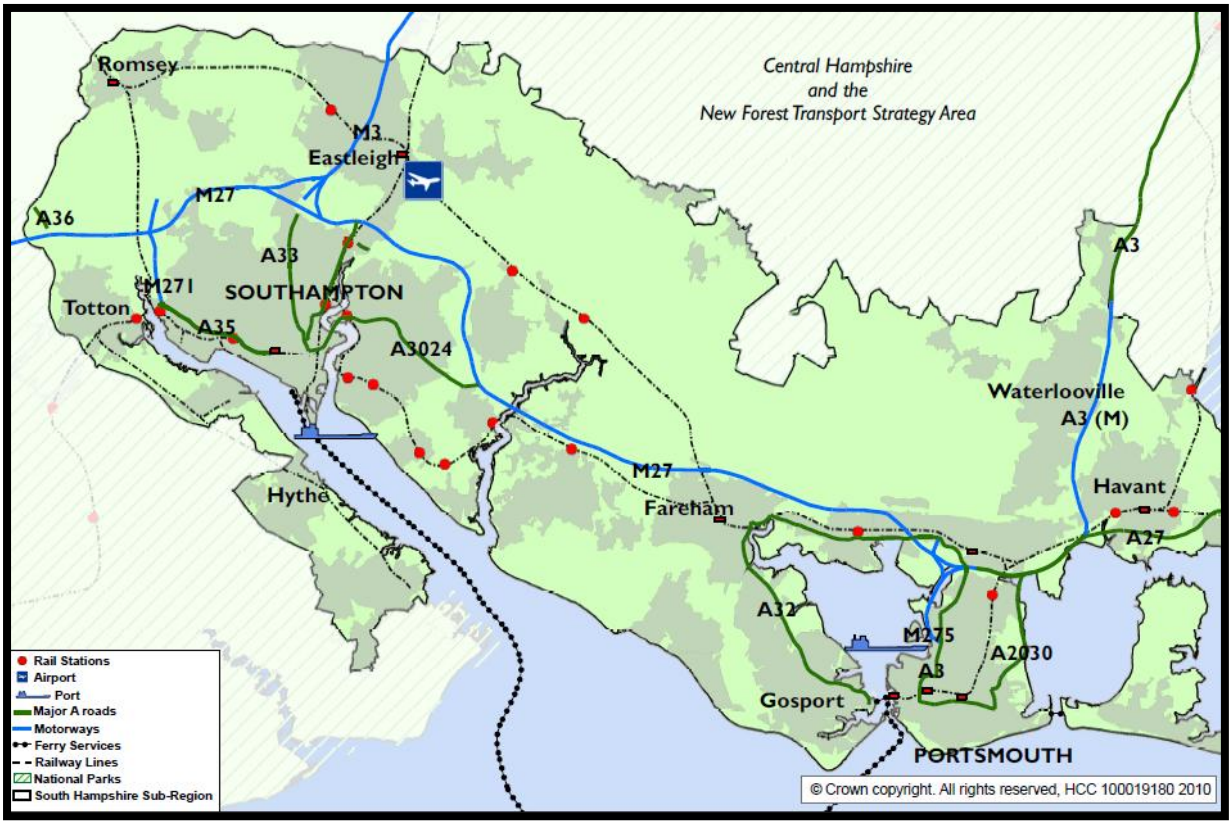
- Transport context
- Administrative context
- Economic context
- Environmental context
- Social context

In so doing, this section contextualises the transport barriers and identifies the priorities to which transport solutions must respond in order to align with local ambitions.

2.2.1 Transport Context

South Hampshire is a key transport hub and gateway to mainland Europe and beyond. There are three international gateways: the Port of Southampton, the Port of Portsmouth and Southampton International Airport. These represent key assets to the local economy, but add to the flows of transport movement into and out of what is the most urbanised area in the South of England, outside London.

The main transport networks in South Hampshire are shown in *map 2.1*.



Map 2.1 Transport Network in South Hampshire
Source: HCC, 2011

The Trunk Road network comprises the M3, M27, A27(T), A3(M), M271 and M275. The M3 and A3(M) provide connections northwards towards London. The M3 connects to the A34 at junction 9 and provides a key strategic link to the Midlands. The M27/A27(T) provide routes to the West and East along the South coast. The M271 and M275 provide connections into the urban city areas of Southampton and Portsmouth respectively, including the port facilities. The M27 provides direct access to Southampton Airport. As well as strategic flows, these motorway routes are used by high levels of local traffic travelling between the main urban areas, and perform a key local distributor function on top of their strategic loadings.

The rail network provides direct passenger services to a number of London stations from both Southampton and Portsmouth, the Midlands (via Basingstoke and Reading), to the west (via Salisbury) and to destinations along the South coast. There are stations in all the main urban areas, except for Gosport and the Waterside. The main train operator in the area is South West Trains, with other services being by Southern, First Great Western and Cross Country.

Rail freight services are dominated by container movements between the Port of Southampton and the Midlands/ North of England. Rail's modal share of container movements is likely to increase as a consequence of the recently completed gauge enhancement. There are a number of other rail freight movements within South Hampshire, including aggregates from the Mendips, oil traffic to and from ExxonMobil refinery at Fawley, and services to Marchwood Military Port. A rail freight terminal at Fratton to serve the Port of Portsmouth has recently been established.

There is an extensive network of bus services within and connecting the main urban areas, with less comprehensive and less frequent services to/ from the smaller settlements. The bus services operating outside of the two cities are generally poorly used and often rely upon financial support. This causes accessibility problems for residents in those areas and therefore reduces opportunities for those who do not have access to a car.

The main operators in the area include Bluestar (Go South Coast), First, Stagecoach, UniLink and Black Velvet. These services are supplemented by a range of long distance coach services operated by National Express and Greyhound amongst others. These provide a good service to London and beyond.

The bus operators within the area have come together to form the South Hampshire Bus Operators' Association (SHBOA), whose primary objective is to act as an interface between the bus industry with Transport for South Hampshire (TfSH). The South Hampshire Bus Operators Agreement was signed between TfSH, Stagecoach, First, Go South Coast and Black Velvet Travel (on behalf of independent operators) in June 2010 and aims to promote modal shift in favour of the bus to support the growth agenda, with the objective of delivering 5% growth in passenger numbers across South Hampshire per annum. The agreement supports the use of partnership based delivery including the use of Punctuality Improvement Partnerships and Quality Bus Partnerships to deliver schemes.

A Board has been established to represent SHBOA on a day-to-day basis, and seats on that Board are based on the number of buses operating within the TfSH area. Companies represented on the board are First, Go South Coast, Stagecoach and Black Velvet. All the operators within SHBOA are committing to the principle of bringing investment in improved rolling stock (including very high specification vehicles) and training, and are ready to explore forward guarantees where there is significant infrastructure commitment from TfSH and/ or the Councils, and where this gives real priority to public transport. A core principle of SHBOA is the maintenance of an active public transport market as far as possible. SHBOA has been instrumental in delivering the Solent Travel Card. The Solent Travel Card is a paper-based multi-operator ticket providing unlimited travel on South Hampshire's bus network.

A Bus Rapid Transit (BRT) network for South east Hampshire is an aspiration for TfSH, and work to define the wider network and funding options is underway. Using £20m of Community Infrastructure Funding, Hampshire County Council is currently building the first phase of BRT connecting Fareham with Gosport.

A number of ferry services exist, the most important being those to the Isle of Wight from Portsmouth and Southampton. 11.3 million passengers use the ferry services to the Isle of Wight each year (including the ferry from Lymington in the New Forest). Local ferry services offer important links between Gosport and Portsmouth, Hythe and Southampton, Hayling Island and Portsmouth, and Hamble and Warsash. These ferries carry over 4 million passengers per year.

Accessibility across the area is strongly influenced by its coastal nature and the four main rivers crossing the area. Southampton Water and the River Test separate the urban Waterside area in the New Forest from the city of Southampton; the River Itchen represents a major river crossing within Southampton; The Hamble River and Portsmouth Harbour give Gosport its peninsula characteristics; and the city of Portsmouth is predominantly contained within Portsea Island. This effectively creates a number of peninsulas across South Hampshire, making inter-urban travel opportunities more difficult to provide.

The local rail network continues to see growth in passenger numbers. However, there are constraints on rail capacity in both Southampton and Portsmouth and on the Fareham – Eastleigh rail corridor. This is due to the existence of lengthy stretches of two-track railway and the flat junctions at Eastleigh and Basingstoke. Given the mix of trains using the main rail lines in the area, line capacity is already an issue for reliable operation, with little or no capacity being available to accommodate more trains between Winchester and Southampton Central. A key constraint for east-west services is the single track section between Botley and Fareham.

Turning to the transport policy context, the Coalition Government has established a new policy agenda around localism, the Big Society and Local Enterprise Partnerships.

The transport white paper, Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen was published in January 2011. Its vision is for "*a transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in communities*". This will be achieved through a combination of investment and stimulating behaviour change by offering people better transport choices, particularly with regard to short, local journeys.

Key measures in the white paper include:

- A £560m Local Sustainable Transport Fund (LSTF) to address the urgent challenges of building economic growth and tackling climate change, as well as delivering cleaner environments, improved safety and increased levels of physical activity;
- A commitment to work with the transport industry to support the development of *e*-purses and other technology related to smart ticketing and to deliver, with operators and public sector bodies, the infrastructure to enable most local public
- transport journeys to be undertaken using smart ticketing by December 2014;
- A reduction in the bureaucratic burdens on local authorities by simplifying access to transport funding, allowing councils to decide on road classifications without going through central government, and simplifying the regulations for introducing new road signs; and
- Highlighting the importance of the national standard for cycle training and specific funding for Bikeability and the 2011/12 Cycle Journey Planner to encourage cycling.

Hampshire County Council, Southampton City Council, and Portsmouth City Council have worked in partnership as Transport for South Hampshire (TfSH) to produce the Joint Local Transport Plan (LTP3) Strategy for South Hampshire, which will guide the development of the local transport networks until 2031. It has been produced following extensive consultation with the public and our strategic partners.

The LTP identifies the following vision for South Hampshire:

> *"A resilient, cost effective, fully-integrated sub-national transport network, enabling economic growth whilst protecting and enhancing health, quality of life and environment".*

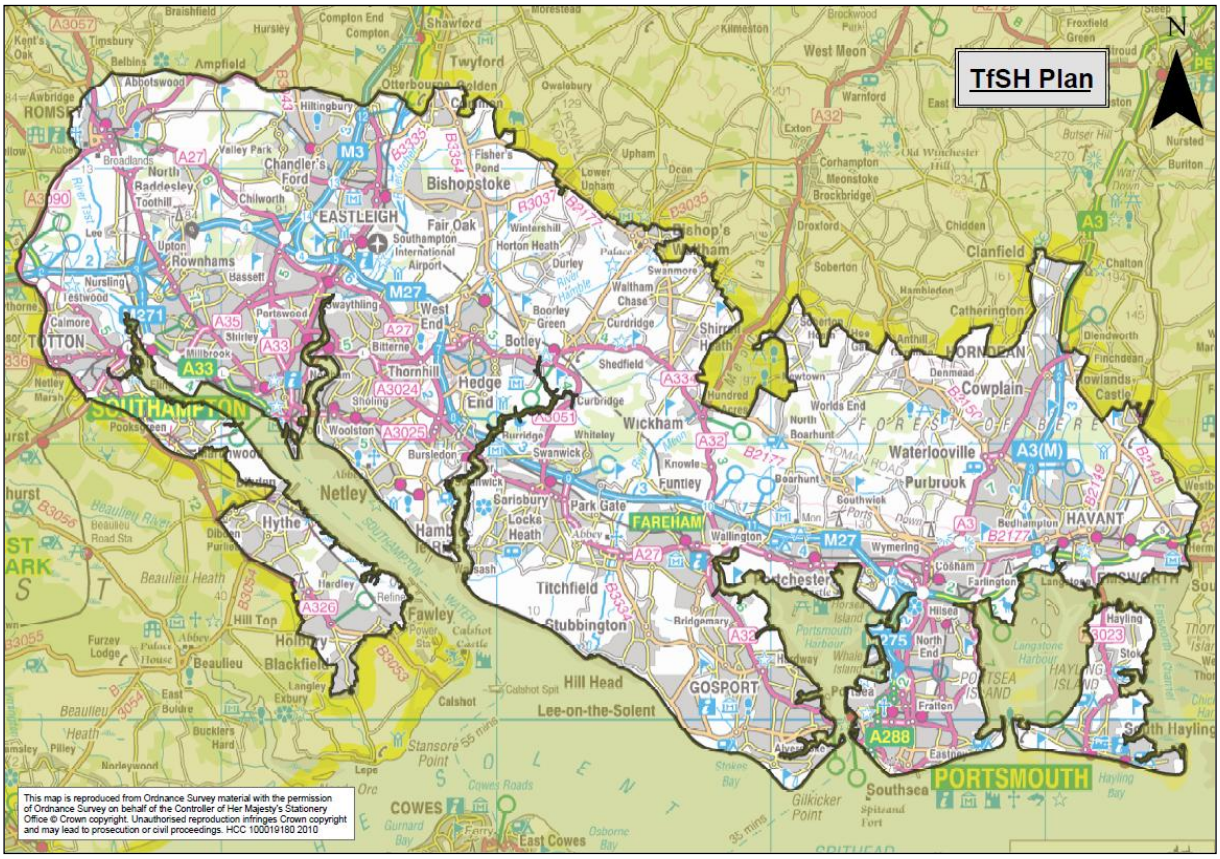
This vision will be delivered through a set of fourteen transport policies. These are:

Policy A: To develop transport improvements that support sustainable economic growth and development within South Hampshire	**Policy H:** To promote active travel modes and develop supporting infrastructure
Policy B: Work with the Highways Agency, Network Rail, ports and airport to ensure reliable access to and from South Hampshire's three international gateways for people and freight	**Policy I:** To encourage private investment in bus, taxi and community transport solutions, and where practical, better infrastructure and services
Policy C: To optimise the capacity of the highway network and improve journey time reliability for all modes	**Policy J:** To further develop the role of water-borne transport within the TfSH area and across the Solent
Policy D: To achieve and sustain a high-quality, resilient and well-maintained highway network for all	**Policy K:** To work with rail operators to deliver improvements to station facilities and, where practical, better infrastructure and services for people and freight
Policy E: To deliver improvements in air quality	**Policy L:** To work with Local Planning Authorities to integrate planning and transport
Policy F: To develop strategic approaches to management of parking to support sustainable travel and support economic development	**Policy M:** To develop and deliver high-quality public realm improvements
Policy G: To improve road safety	**Policy N:** To safeguard and enable the future delivery of transport improvements within the TfSH area

Each Local Transport Authority (LTA) is also responsible for developing its own supporting implementation plan, outlining how the policies and strategies will be put into practice.

2.2.2 Administrative Context

The area covered by Transport for South Hampshire (TfSH) includes the city unitaries of Portsmouth and Southampton and the districts of Eastleigh, Fareham, Gosport, and Havant, together with parts of East Hampshire, New Forest, Test Valley and Winchester. The area is illustrated in *map 2.2*. Hampshire County Council (HCC) is the upper tier authority for the area covered by the Districts.



Map 2.2: Transport for South Hampshire Area
Source: HCC, 2011

The South Hampshire area represents a functional economic area with flows of people between the authority boundaries, in particular between the HCC area and the two cities. In recognition of the need to plan for transport on an area-wide basis Transport for South Hampshire (TfSH) was set up in 2007. TfSH has been successful in raising the profile of the significant transport problems that exist in South Hampshire and in identifying solutions and funding opportunities.

Likewise, on the spatial planning side, joint working is also strong. Partnership for Urban South Hampshire (PUSH) is a partnership of the authorities of South Hampshire and was established in 2004. PUSH provides a mechanism for joint working on spatial planning and was established to address the significant housing and employment growth agenda for South Hampshire.

More recently the Solent Local Enterprise Partnership (LEP) has been set up. The LEP is led by the business community and supported by four university partners, the further education sector, three unitary authorities, eight district councils, one county

council and the voluntary and community sector, all of whom are actively working together to secure a more prosperous and sustainable future for the Solent area. The vision of the LEP is to create *"an environment that will better facilitate economic growth and private sector investment in the Solent area, allow businesses to grow, become more profitable, greener and enable new businesses to form and prosper."*

TfSH provides advice and research for both PUSH and the Solent LEP on transport matters. A business board member of the Solent LEP has recently accepted a position as a member of the TfSH Joint Committee.

Partnership working is a strong feature of transport delivery in South Hampshire, and has assisted the development of this business case, with involvement of a range of partners including, district councils, SUSTRANS, South Hampshire Bus Operators Association (SHBOA), Transportation Research Group at the University of Southampton, Transport Alliance (a grouping of business representatives from the Chambers of Commerce, Business Solent and Hampshire Alliance), South West Trains and Network Rail. Guidance from DfT through regular liaison meetings has been helpful.

2.2.3 Economic Context

South Hampshire reflects a functional economic area, anchored around the two cities of Portsmouth and Southampton and the M27 corridor. The area has economic linkages with its neighbouring areas, and also with the regional, national and global economies, principally through its three international gateways:

- Port of Southampton
- Port of Portsmouth
- Southampton Airport.

The area has a diverse economy, with a significant marine-related sector, reflecting its coastal location, and important service and advanced manufacturing sectors. The retail and leisure sectors are also important, with significant investment, particularly in the city centres over the last 10 to 15 years. However, despite these strengths, South Hampshire's economy has been underperforming compared to the rest of South East England and the two cities, in particular, punch below their weight and perform poorly in comparison to many northern industrial cities across a number of economic metrics. Like many areas across the UK, South Hampshire and its businesses have been hit by the recession and continue to be affected by the fragile state of the economy.

Current Economic Performance

Gross Value Added (GVA) is a measure of economic output used to assess sub-national economies. In 2009 the GVA generated in South Hampshire was estimated to be £17.8bn, which is lower than the average for the South East, whilst GVA per capita was estimated to be £17,100, 11% below the South East level of £19,200. The performance gap continues to be created by both lower levels of employment and lower levels of productivity. This is in part driven by the structure of the economy, with higher levels of public sector employment, but also by the activities within sectors. This is evidenced by occupational and skills profiles which have lower concentrations of working age population in the highest order skills categories.

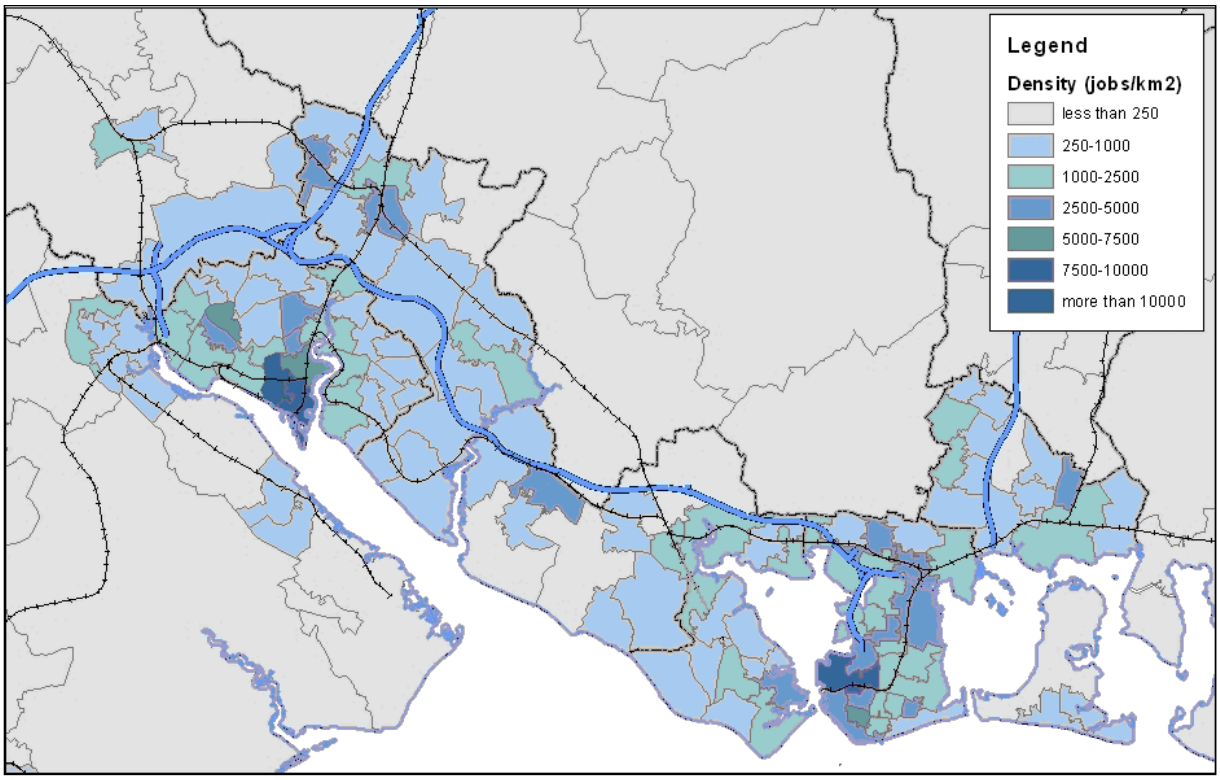
Total employment in South Hampshire (across the 6 full districts[1]) is currently at 411,100 (2011). This is a drop on the 2009 figure of 412,300 and far lower than the pre-recession (2007) figure of 427,000. In particular, Southampton saw a 2.1% fall in employment through the recession – far worse than cities such as Liverpool, Manchester and Leeds. This fall has continued and is now 3.7% lower than pre-recession levels. Portsmouth has seen a fall in employment of 1,500 jobs, whilst Havant has seen the greatest percentage fall in employment since 2007 at 4.8%.

An underlying trend in the spatial distribution of employment opportunities over the past 15 years has been a migration from the urban core to the rural periphery, where employment growth has been strongest at 21% (PUSH, 2010b). Much of this growth in employment opportunities has developed along the M27 corridor at

[1] Eastleigh, Havant, Gosport, Fareham districts and Southampton and Portsmouth Unitaries are wholly contained within the South Hampshire sub-national area and data is readily extractable. The districts part contained within South Hampshire (New Forest, Test Valley, Winchester, and East Hampshire) are not included within these figures.

business parks such as Whiteley. Access to such sites, as well as modern office accommodation with plentiful parking, initially attracted businesses away from our city centres. However, these sites now add to peak capacity problems on the M27.

The average job density for the whole of South Hampshire is 0.74 (2009). However, Southampton, Havant, Fareham and Gosport have a job density below the UK (0.77) and South East Average (0.80). In particular, Gosport has one of the lowest local authority district job densities in the UK at 0.46 and the lowest job density in the South East. The highest job density in South Hampshire is in Portsmouth, at 0.86. *Map 2.3* shows employment density in South Hampshire.



Map 2.3: Employment Density in South Hampshire
Source: HCC, 2011

Figure 2.1 shows the proportion of employment within each sector of the local economy. This shows that the Business Services and the Distribution and Retail sectors are the largest employers.

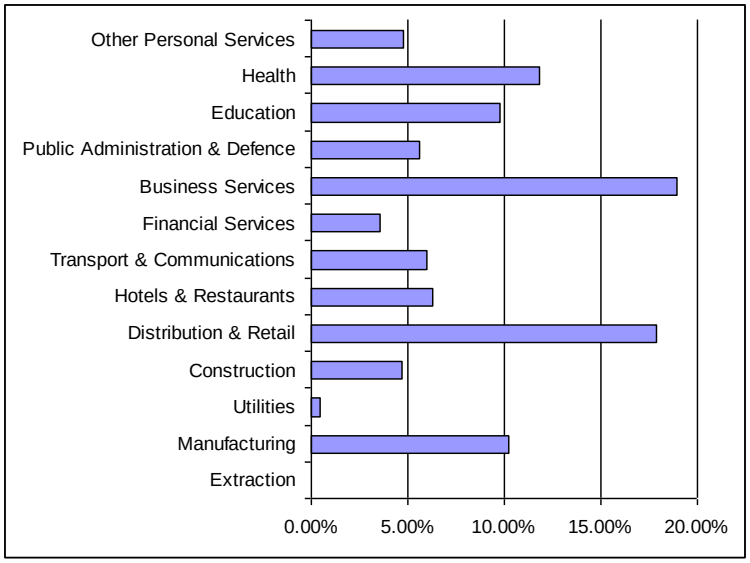


Figure 2.1: Proportion of Total Employment in South Hampshire by Sector
Source: DTZ 2010b

The retail sector has contracted between 2008 and 2010 across most of the town centres in South Hampshire. This is shown in *Figure 2.2.*

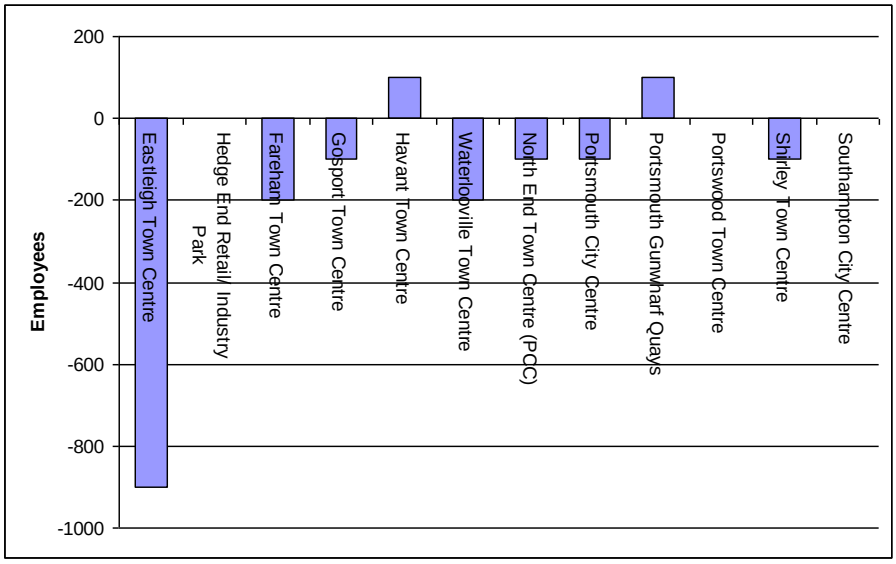


Figure 2.2: Estimated Change in Retail Employment in South Hampshire Town Centres 2008-10
Source: ONS Business Registration Employee Survey

Eastleigh Town Centre stands out with a significant contraction in retail employment relative to the other town centres. The retail employee share in Eastleigh Town Centre went from around 28% of all sector employees to around half that in 2010 (16%), the result of 50% fewer retail employees. The reliability of the data may be partly to blame, but more reliable district data suggests there were around 1,400

fewer retail employees as a whole between 2008-2010, which would imply significant losses in this sector. Eastleigh and Havant districts both have a higher share of employees in the retail sector, which makes them more vulnerable during downturns in consumer spending.

Ignoring the impact of the recession, Gosport, in particular, has seen a significant reduction in the number of jobs over the past 20 years. As a consequence, Gosport experiences significant out-commuting. During the recession, unemployment in Gosport increased at 3.1% per year.

Figure 2.3 provide a comparison of enterprise births and deaths in 2009 in South Hampshire. This shows that in 2009, more enterprises closed than opened, and is evidence of the difficult trading environment for new businesses in South Hampshire.

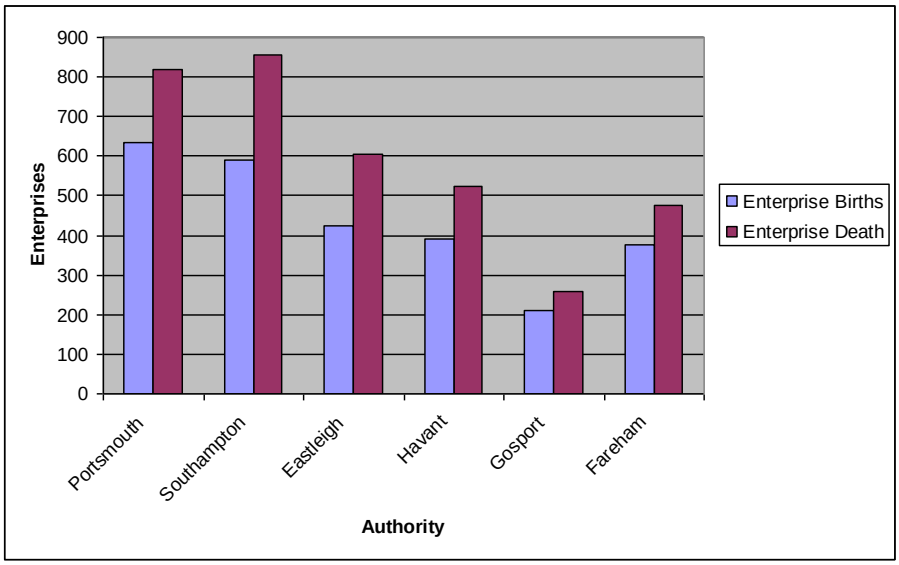


Figure 2.3: Comparison of Enterprise Births and Deaths in 2009 in South Hampshire
Source: ONS

The South Hampshire economic activity rate equates to 77.8% of the working age population. This is 1.8 points above the UK rate of 76.0%, but half a point below the South East rate of 79.3%. There hasn't been a notable increase in economic activity rates over the past five years. Portsmouth, Southampton and Gosport have faired the worst in recent time with each seeing a -3.5%, -3.0%, and -4.1% fall respectively between 2006-7 and 2010-11. Indeed, economic activity in South Hampshire is lower than a number of northern districts, including Warrington (80.6%), Stockport (80.1%) and Stockton-on-Tees (78.4%).

The South Hampshire employment rate equates to 72.0% of the working age population. This is 2.2 points above the UK rate of 72.2%, but 2.6 points below the South East rate of 74.6%. The employment rate fell by 3.1% between 2006-07 and 2010-11 in response to a contraction in the labour market. Gosport has fared particularly badly in recent times, with a -10.3% fall in economic activity between 2006-7 and 2010-11.

Employment rates in South Hampshire were lower than a number of northern districts, including Burnley (73.6%), Stockport (74.7%) and Warrington (76.4%).

The South Hampshire ILO unemployment rate equates to 7.4% of the working age population. This is just 0.3 points above the UK rate of 7.7%, but 1.5 points higher than the South East rate of 5.9%. In South Hampshire, the ILO unemployment rate fell by 2.6 points between 2006-07 and 2010-11, with the highest current unemployment level in Gosport 9%, whilst Portsmouth (8.3%) and Havant (8.5%) are also high. Unemployment in South Hampshire was higher than a number of northern districts, including Darlington (6.2%), York (6.4%) and Stockport (6.7%).

The impacts of public sector job cuts are being felt across South Hampshire, with Portsmouth expected to be proportionally the fifth hardest hit city in the UK for public sector job losses, losing 6,300 jobs (Centre for Cities, 2010).

With many firms hoarding employees during the recession, albeit on pay freezes and/or reduced hours, there has been limited employment opportunities post-recession for new entrants coming into the labour market. There has always been a core of young people who are unemployed, but young people in particular have been hit hard by the recession with limited employment opportunities in the private and public sector. At the same time, older worker rates have generally risen. The 16-24 year old JSA rate in South Hampshire for September 2011 was 4.0%, 0.6 of a point below September 2009 during the recession, but 1.8 points higher than September 2007 (NOMIS, DWP Jobseekers Allowance Benefits 2011). Rates vary across South Hampshire, ranging from 3.5% in the two cities to 6.1% in Gosport, which is close to the UK rate. In September 2007, 16-24 year old JSA claimants in South Hampshire stood at 2,805 before rising to 6,080 by September 2009 during the latter stages of the recession. Numbers have since fallen by 745 to stand at 5,335 in September 2011 – although this is close to twice pre-recession levels.

The South Hampshire economic inactivity rate equates to 22.2% of the working age population (ONS Annual Population Survey Resident Analysis 2011). This is 1.8 points below the UK rate of 24.0%, but 1.5 points above the South East rate of 20.7%. Economic inactivity is most prevalent in Portsmouth (24.3%) and Southampton (26.7%). South Hampshire economic inactivity rates are above northern districts including North Tyneside (19.1%), Stockport (20.0%) and Stockton-on-Tees (21.6%). According to the latest annual release from the Annual Population Survey (April 2010 – March 2011), there were around 128,000 economically inactive residents in South Hampshire, roughly 10,200 more than in 2006-07.

Economic Development Strategy for South Hampshire

In 2010 PUSH published a new Economic Development Strategy (EDS). This identified the following:

- The South Hampshire economy is less prosperous than the wider South East
- Our cities are not fulfilling their potential as drivers of economic growth with recent employment growth concentrated around the M27 corridor.

- The recession has changed the labour market situation substantially since the 2005 EDS, with many more unemployed residents

The change in the global macroeconomic environment has reduced the likely scale of future economic growth in South Hampshire. As a consequence, baseline projections for the South Hampshire economy developed by Oxford Economics to inform the EDS identified that:

- Average annual GVA growth over the period 2006-26 will be around 2% rather than the PUSH aspiration of growth in excess of 3%
- Recovery and growth need to be led by the private sector, particularly export markets, as the primary drivers of pre-recession growth; the public sector and domestic consumers, will not be the sources of substantial demand in the decade to come
- The GVA per capita gap between South Hampshire and the South East region will widen again to 12%
- The number of jobs in South Hampshire is expected to increase by about 41,000 jobs, substantially lower than the PUSH target of 59,000 jobs over the period 2006-26
- Pre-recession levels of employment will not be reached until around 2015
- The population will continue to grow through both natural change and inward migration
- The combination of lower employment growth and ongoing population growth will result in higher levels of unemployment created by the recession persisting into the longer term with much lower employment rates.

Baseline economic modelling represents an undesirable scenario for South Hampshire. The EDS therefore sets out a vision for the future, which includes:

> "*a higher level of employment in South Hampshire and greater levels of participation among our workforce so that the benefits of growth are open to all residents. This is a vision of a more sustainable economic future that utilises the assets we already have in the sub-region. It will build on our key sectors, on our resident population, on our world class businesses and on our existing institutions* (DTZ, 2010a)."

The EDS has identified the areas of the local economy where investment and efforts should be focused. This has included an identification of sectoral strengths in South Hampshire that provide opportunities to drive economic output and underpin employment growth.

At its heart, this alternative future is built on using the assets of South Hampshire to underpin growth, and to ensure residents can participate in a more prosperous future.

This is manifested in:

- An increase in the number of jobs to help reduce unemployment and increase the employment rate as a result of support for key sectors, boosting innovation and ensuring a highly skilled workforce;
- Prioritising investment in workforce and skills development to ensure the resident workforce is well placed to access employment opportunities in the sub-region and avoid the need for employers to have to recruit as many workers from outside the area;
- Boosting productivity to raise GVA through higher levels of skills and innovation, particularly driven by our priority sectors;
- Ensuring our cities fulfil their potential as drivers of sustainable and high value growth for the sub-regional economy, whilst tackling the disadvantage and deprivation which is present in parts of the cities and elsewhere in South Hampshire.

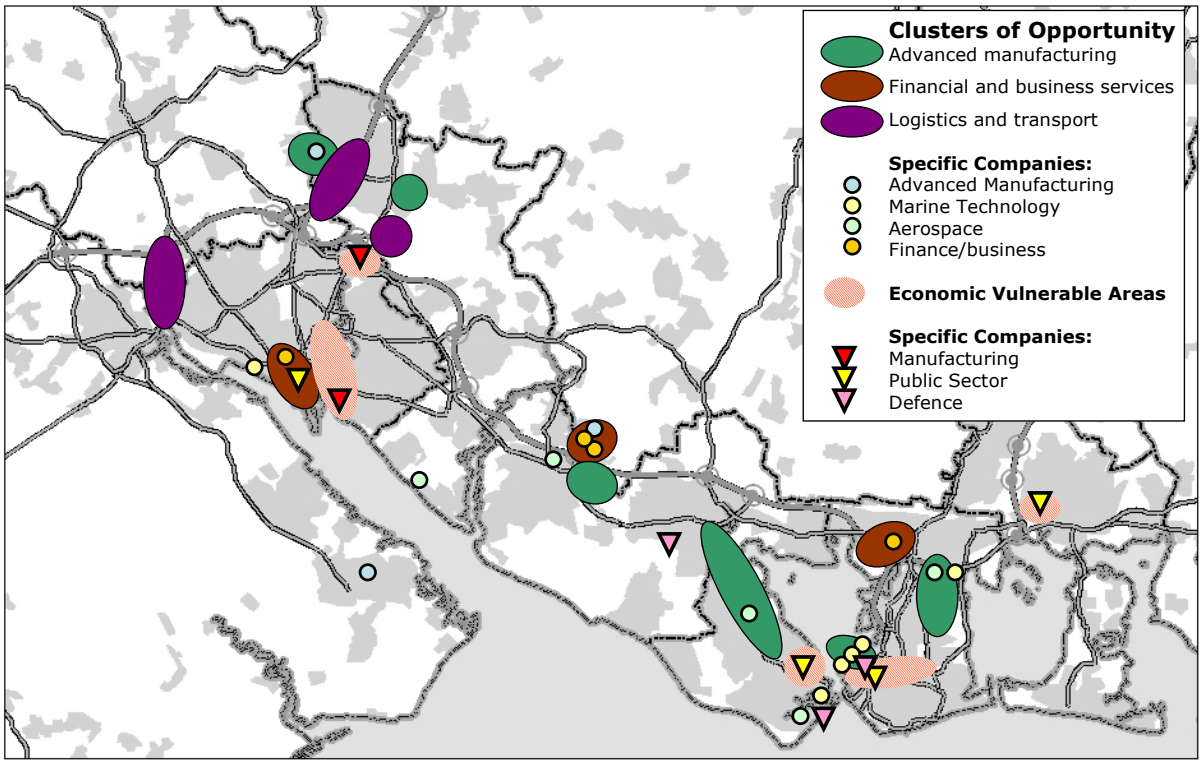
The key sectors, in which South Hampshire has a competitive advantage are identified in the table below.

Using Local Strengths to Generate High GVA	**Creating Employment Opportunities for Many**	**Underpinning Quality of Life and Place**
Advanced Manufacturing	Financial & Business Services	Creative Industries
Marine	Health & Care	Retail
Aerospace		Leisure & Visitor Economy
Environmental Technologies		
Transport & Logistics		

Contained within these sectors in South Hampshire are some major employers, including ExxonMobil, GE Aviation Systems, Chemring Group PLC, Qinetiq, EADS Astrium, Vector Aerospace, Meggitt Avonics, IBM, Zurich Insurance Group, Skandia, ABP, Carnival UK, Brittany Ferries, First Group PLC, and B&Q. Many of these have their head quarters in South Hampshire, including IBM, Carnival UK and B&Q.

A number of these sectors – and in particular the high volume employers – continue to be located in the cities and town centres, despite the migration to the rural fringe mentioned above. In addition, a number of these sectors (Retail, Financial &

Business Services, Health & Care, Transport) have been identified nationally as currently having greater economic significance (UKCES, 2010). *Map 2.4* summarises the geographic distribution of those employment sectors where South Hampshire has a competitive advantage and therefore clusters of 'opportunity', as well as those geographic areas that are 'vulnerable' including employment sectors with a challenging future.



Map 2.4: Clusters of Opportunity in South Hampshire

There are three main areas of opportunity encompassing those sectors with potential for future growth: advanced manufacturing and the core sectors of business and financial services and logistics and transport.

Tourism in Portsmouth is particularly strong and accounts for 7.6 million visitors per year, spending £373 million and supporting over 7,000 jobs. A recent study valued seaside tourism in Southsea alone as worth £58 million to the local economy and supporting 2,900 jobs.

In following a preferred growth scenario, by 2026 South Hampshire aims to realise an improved economic performance against the baseline. This is shown in *table 2.1.* As table 2.1 uses a 2006 base, and as in some instances performances has fallen against that base (as a consequence of the recession) the growth required is even larger. For example, the growth in new jobs from 2011-26 will be in the region of 56,300.

	Preferred Scenario	Baseline
GVA Growth	+£9.6bn	+£8.7bn
GVA Growth Rate (CAGR)	2.1%	2.0%
GVA per Capita Change	+£6,400	+£5,300
GVA per Capita Gap – PUSH vs South East (2026)	7%	12%
Employment	+51,200	+41,300
Employment Rate (2026)	75.9%	72.7%
Employment Rate Change	+0.8% points	-2.4% points
Productivity Growth (CAGR)	1.7%	1.6%

Table 2.1: Preferred Growth Scenario Against Baseline (2006 base)

Figure 2.4 shows the GVA growth rate for South Hampshire under the baseline (red) and preferred growth scenario (green). The key period of effort needs to be from 2011 to 2015 to increase the GVA growth rate. This matches the period of our LSTF proposals.

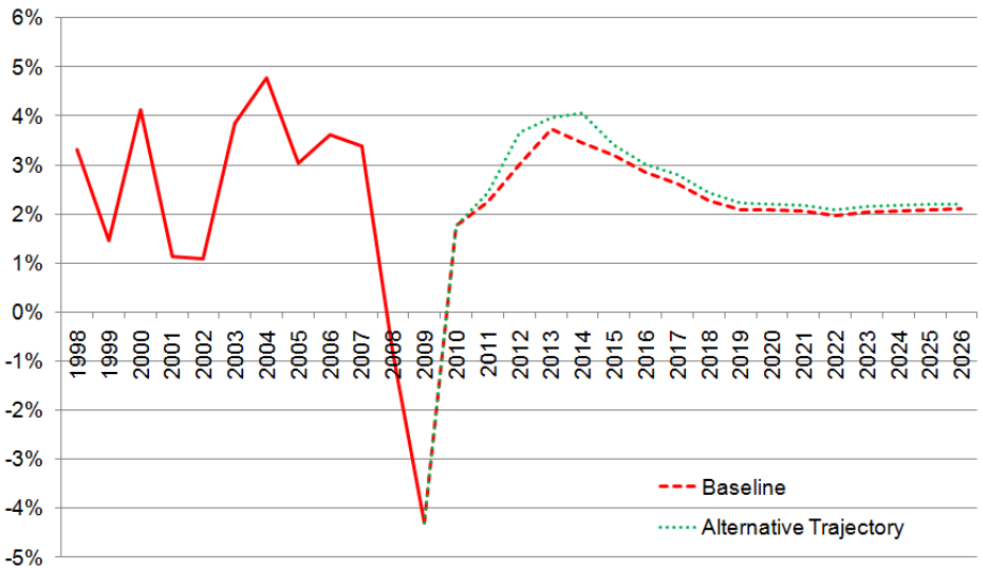


Figure 2.4: GVA Growth Rate for South Hampshire (Baseline and Preferred Growth Scenario)

To achieve the preferred growth scenario there is a need for investment from all partners to be aligned, to ensure maximum efficiency of impact.

The Solent LEP objectives very closely mirror the actions identified in the 2010 PUSH EDS and the LEP recognises that transport and mobility will play an important role in achieving these aims. In particular, the Solent LEP recognises the importance of

"*enhancing transport partnerships to deliver the transport infrastructure needed to unlock the economic potential of sites and areas*". There is a desire to support low cost opportunities, complementary land use strategy, better management of transport networks and investment in sustainable modes of transport. This aligns well with our proposals.

The Solent LEP also notes the important role of the international gateways of Southampton and Portsmouth ports and Southampton International Airport and the need to capitalise on the area's transport infrastructure in order to support the development of both a growth hub for business and the visitor economy.

International Gateways in South Hampshire

South Hampshire has three international gateways: The Port of Southampton, the Port of Portsmouth, and Southampton International Airport. These key transport hubs play a significant role within the local and national economies and attract significant volumes of freight and passenger trips from elsewhere in the UK. The Port of Southampton, in particular, plays a key role in the supply chain for the UK economy and has seen exceptional growth in recent years.

The Solent Waterfront Strategy (June 2008) highlighted that marine industries contribute significant economic benefits to the local area (£3.6 billion), providing 25,000 direct jobs and making up around 20% of the Solent economy. However, the true value of the Solent marine sector is often under-estimated along with its future economic potential as a driver for growth. The Strategy states that South Hampshire's importance for marine industries is founded on three key activities: the commercial port of Southampton, the defence port of Portsmouth and the marine leisure and recreational business based on Lymington, the River Hamble and Cowes. These three activities are identified as being of national importance and the very essence of the marine asset in the Solent area, their continued growth and prosperity being directly linked to the economic prosperity of the South Hampshire.

The Port of Southampton

The Port of Southampton is a major international deep-sea port with significant economic importance being a key cog in the global supply-chain. It is currently experiencing phenomenal growth in the cruise passenger and container markets. Key statistics include:

- UK's second largest container port (currently handling 44m tonnes of cargo per year)
- the port handles 40-45% of the UK's trade with the Far East and China
- UK's leading port for motor vehicle exports
- Europe's largest cruise port

The Port Masterplan (2009) forecasts significant levels of growth in throughput of containers, passengers, vehicles and dry bulk. This is shown in the table below.

	2005	2020	2030	% Growth 2005-2030
Cruise Passengers (000s)	702	1,498	1,917	173%
Containers – TEU[2] (000s)	1,382	2,694	4,204	204%
Motor Vehicles (000s)	724	702	844	17%
Dry Bulk (000s)	1,357	1,786	2,166	60%

Source: Port of Southampton Masterplan (2009)

The biggest challenge for the port identified in the Masterplan is to expand and enhance its role. The key infrastructure improvements to meet this demand is through optimisation and intensification of activities on existing sites particularly through the conversion of some car storage areas to multi-decks with remaining storage areas being used for the container port and a new cruise terminal.

The recently completed project to enhance the rail gauge to and from the Port to allow high cube containers to travel on conventional wagons will boost rail's modal share to/ from the port. At present approximately 70% of containers are transported by road, 25% by rail and the remainder by inshore water. The majority of motor vehicles are transported by road although there are 10 trains per week transporting vehicles to the port. The majority of the Port's cruise passengers arrive and depart by road, either car or coach. To minimise the impact of future growth the port are aiming to achieve a 40% mode share for rail and 25% of container traffic to be trans-shipped by sea. These mode share targets together with forecast demand growth are expected to result in a 52% increase in amount of containers transported by road by 2030.

The growth in the cruise market has been remarkable. Southampton's share of the UK cruise market in terms of passenger numbers grew from 47% in 1999 to 69% in 2009. In the same year, the second busiest cruise port in the UK, Dover, only accounted for 15% of all cruise passenger numbers in the UK and the third busiest, Harwich, just 9%.

A recent study into the economic impact of the Port of Southampton (Atkins, 2011) calculated that there are 5,100 jobs in Southampton directly reliant on the Port. If the petrochemical and defence sectors located along Southampton Water are also included, this figure increases to 8,300. Indirect employment (those jobs that are supported by the economic activities of the businesses directly linked to the port)

[2] *Twenty Foot Equivalent Unit*

has been calculated at 5,754. This means that over 14,000 jobs are linked to the Port of Southampton. The total GVA generated by the Port is calculated at £759m.

Looking specifically at the cruise sector, which saw 1.2m passengers in 2010, it has been calculated that this sector supports some 3,500 jobs and £306.3m of expenditure. Indeed, on average, it has been calculated that the Southampton cruise sector generates around £2.5m total turnover per cruise Home Port call (?) (embarkation and disembarkation).

Assuming constraints do not impede the Ports forecast growth, the Port has the potential to directly or indirectly support some 12,593 (South Hampshire), 2,956 (South East), and 3,478 (elsewhere UK) jobs by 2030 and contribute some £2.9 billion towards the national GDP.

Port Operations in Portsmouth

Port operations in Portsmouth include the Naval Dockyard, Portsmouth International Port and the historic dockyard. The latter plays a significant tourism role for South Hampshire, the Naval Dockyard performs a strategic role of national importance, whilst the International Port provide important passenger and freight routes.

The Portsmouth Naval Base and associated activities supports a total of just under 35,000 jobs within South Hampshire, consisting of 13,300 service jobs and 21,600 civilian jobs. These jobs account for 8% of all jobs in South Hampshire and for the employment of 6.2% of people living within the area.

8% of people living in Gosport, 10% of those in Portsmouth and 8% of those in Fareham are in 'defence dependent' jobs. This employment and the spending of defence firms generate an income of £680m for the local economy. In addition to those employed by the MoD many of the jobs are in firms that form part of the local defence 'supply chain'. The Portsmouth Naval Base is at the heart of this supply chain with many small specialist suppliers working directly or indirectly for the Naval Base or one of the three large contractors located on the Base (VT, FSL and BAE). Reducing highway competition through mode shift will release capacity for strategic movements.

Portsmouth International Port is Britain's most successful municipal Port, being owned by Portsmouth City Council. The Port generated a trading surplus of almost £7.1m in 2010/11. This is forecast to exceed £8.5m by 2014/15. All this money is ploughed back into the Portsmouth area.

An economic impact analysis by Portsmouth University has shown that the Port is responsible for the direct employment of 805 FTE jobs and the injection of £38.7m of income into the greater Portsmouth area economy. Indirectly, these figures rise to 1,595 FTE jobs supported by port activity and a total estimated £71.3m output throughout the Greater Portsmouth area economy. The major beneficiary is the Hotels and Catering Sector with output valued at £10.3m, Wholesale Distribution at £9.1m, Manufacturing and Utilities at £4.2m and Retail Distribution at £3.3m.

The International Port handles considerable volumes of 'roll on, roll-off' (RoRo) freight traffic, with other important cargos including fresh fruit and ballast. The port imported 828,324 tonnes and exported 84,846 tonnes of cargo in 2010, whilst movements to the continent in 2010 were:

- Vehicles – 692,848
- Freight - 246,842
- Passengers – 2,288,363

Portsmouth is also an important gateway to the Isle of Wight; other gateways are Southampton and Lymington. The Portsmouth to Fishbourne route is the most popular, especially for freight, carrying two-thirds of total traffic.

Southampton Airport

Southampton Airport is the only airport in South Hampshire and is an airport of regional importance. It is vital that the surface access strategies ensure multi-modal access to help reduce the environmental impact of surface access.

The airport underwent significant redevelopment in 1994 and was designed specifically as a regional airport providing domestic and short haul connections. It has 3 million people within one hour drive of the airport. The majority of passengers (73%) come from Hampshire and specifically South Hampshire. However, Southampton is also an important airport for Dorset and Wiltshire. Southampton Airport has also undertaken market research into the home postcode of outbound passengers which showed 38% of passengers identified their home as Southampton, 20% Portsmouth (including the IOW), 11% Bournemouth, 8% Guildford and 7% Salisbury and Reading 5%.

In 2009 the annual demand for Southampton airport was 1.789 million, a slight drop from the 2007 and 2008 levels. Figure 2.5 shows how demand has changed since 1994 together with the Southampton Airport Master Plan demand forecasts. Demand grew steadily after 1994 and rapidly in 2003-2005 mainly due to increased services operated by low cost carriers such as Flybe.

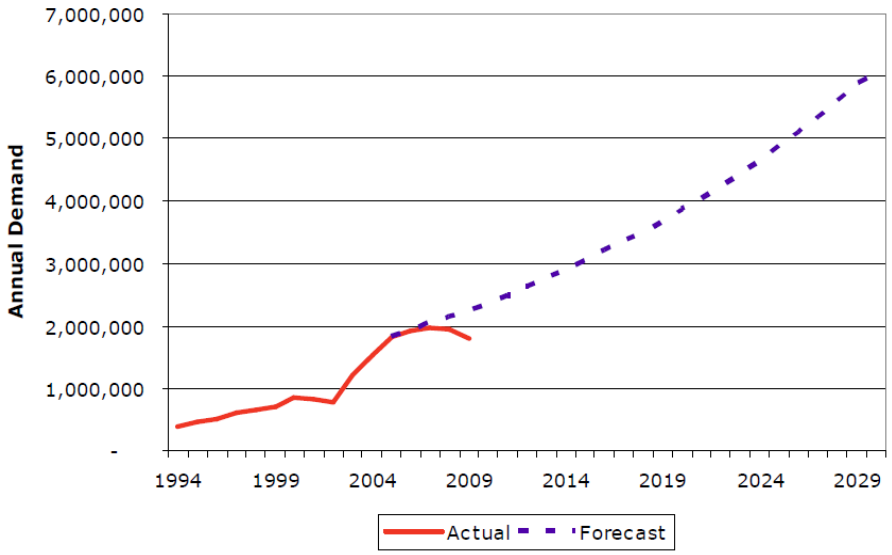
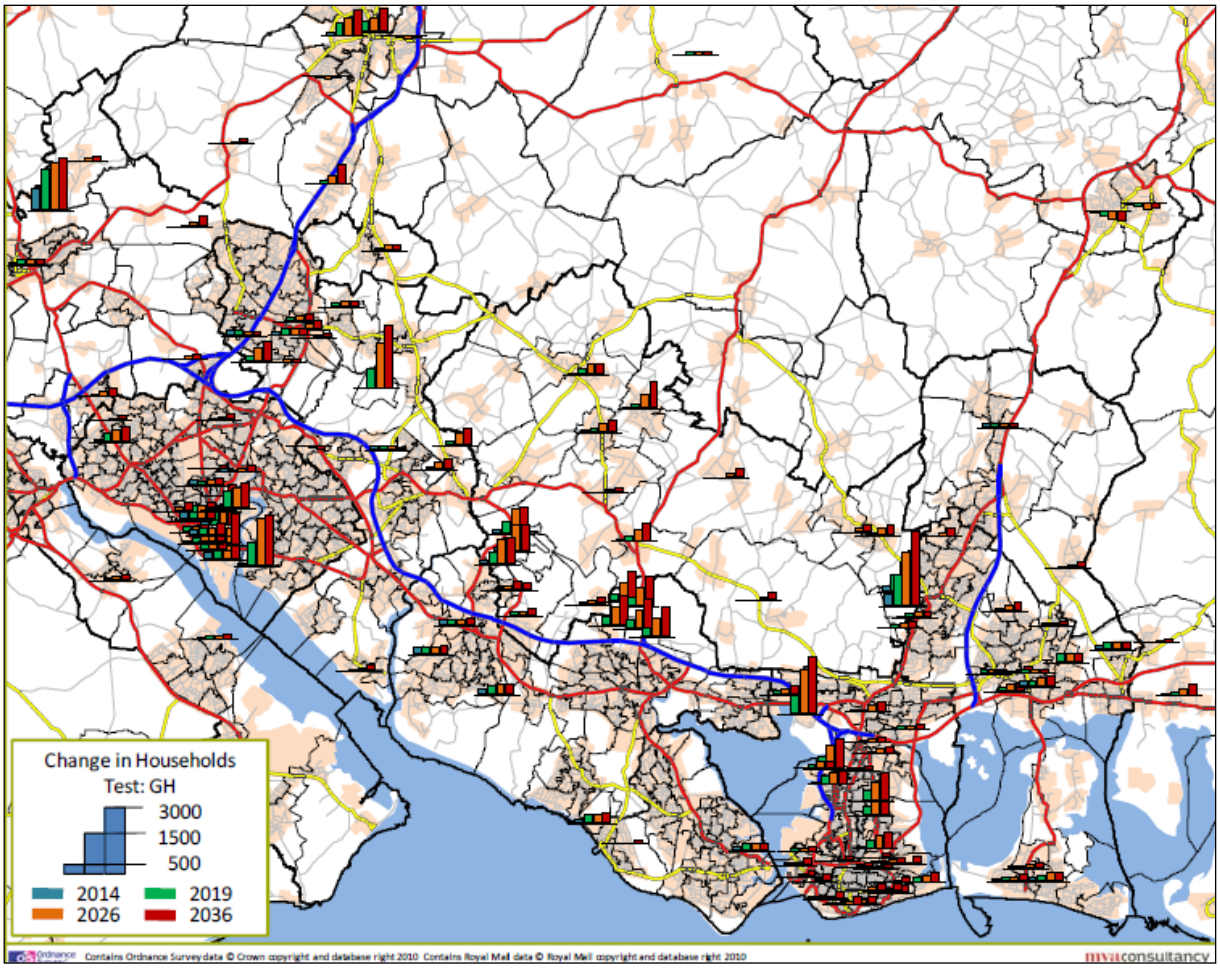


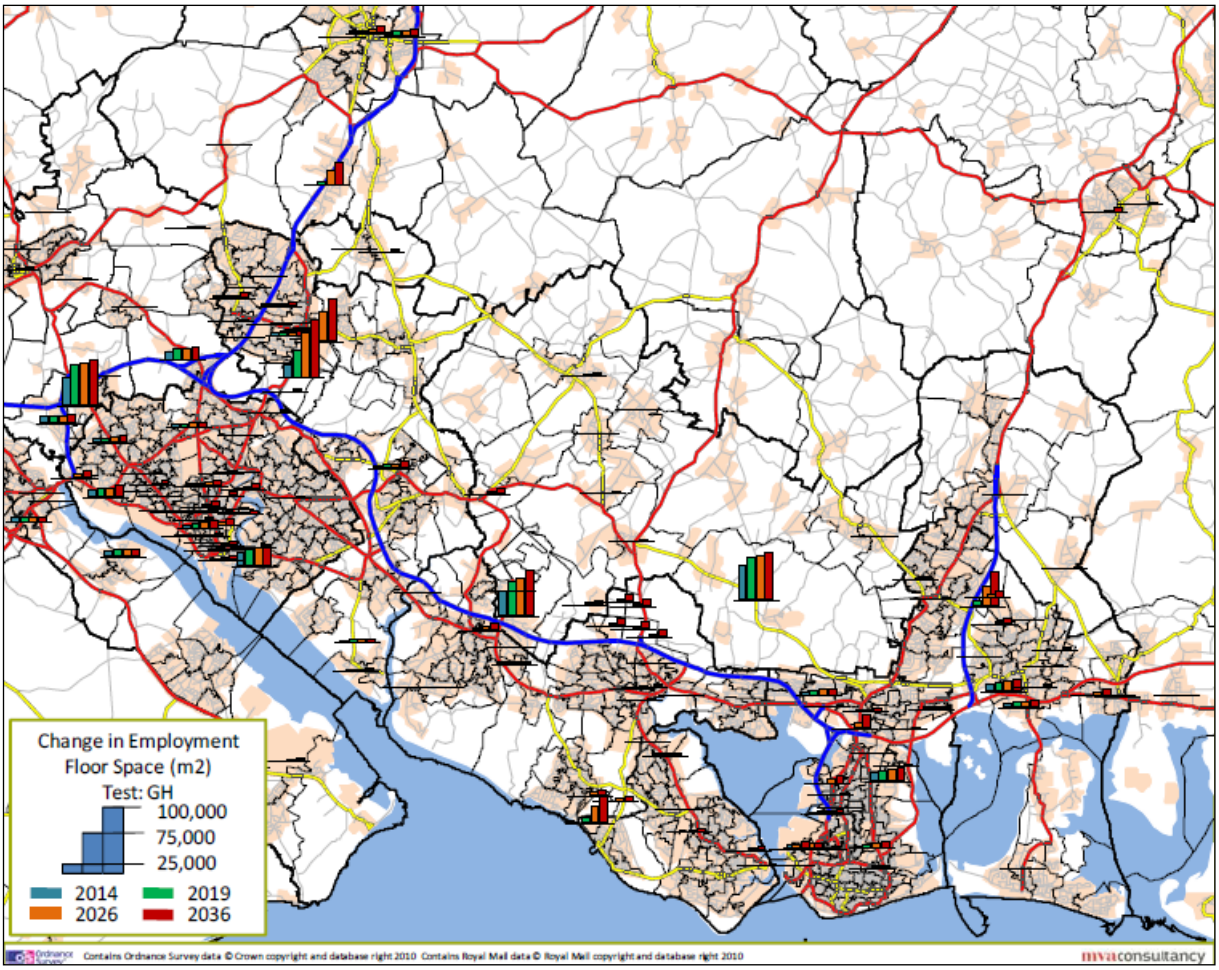
Figure 2.5: Actual and Forecast Demand at Southampton Airport

New Development

South Hampshire has a housing delivery target of 74,000 houses between the period 2006-2026. This has recently been revised down from 80,000 (as set out in the, now cancelled, South East Plan) as a result of the economic situation. PUSH is currently undertaking a review of its spatial strategy, although it is expected that the 74,000 housing target will remain, whilst the figure for employment floorspace in the current spatial strategy is 1,965,000m^2. The vast majority of new development (80%) is to be provided within existing urban areas, in line with the PUSH *Cities First* principle. *Cities First* is the phrase coined to describe an approach of prioritising and focussing new development, economic growth, and regeneration at the urban core of the cities and towns of South Hampshire as the most sustainable locations for growth. Forecast growth in the number of households across South Hampshire is shown in *map 2.4*, whilst forecast growth in employment floorspace is shown in *map 2.5*.



Map 2.4: Forecast Growth in Households in South Hampshire



Map 2.5: Forecast Growth in Employment Floorspace in South Hampshire

Portsmouth City Centre Major Development Site

Portsmouth City Centre has been highlighted as a major site for development by Portsmouth City Council. The Portsmouth Core Strategy outlines the potential for over 2,000 new homes and substantial new office, retail, leisure and education developments. The first phase of the development includes a major new retail centre in the Northern Quarter, which is due to commence in 2015. To maintain the character of different areas of the city centre, eight individual sections have been identified such as University Quarter and Historical Dockyard, each with their own needs and requirements. As a whole, investment will be made to improve the urban realm and make the city centre more attractive and inclusive. In addition, access to the city centre by public transport, cycling and walking has been identified as needing improvement.

Southampton City Centre Major Development Quarter (MDQ)

This site will deliver a substantial proportion of the proposed employment (primarily office), retail, housing and leisure development in Southampton City Centre. The site will have excellent public transport accessibility, being located in close proximity to Southampton Central Station, which is expected to form an integral part of the redevelopment proposals. Masterplanning work has recently commenced in support of the City Centre Area Action Plan. In the city centre overall, including the MDQ, it is expected that 5,000 new homes and over 300,000m^2 of new employment land will be delivered. To support this growth, the strategy is to increase the proportion of journeys made by alternative modes to the car and the Masterplanning work will have a clear emphasis on improving connectivity within the city centre, for pedestrians, cyclists and public transport users

The economic growth of South Hampshire is underpinned by the provision of additional housing. The number of housing completions has remained high in South Hampshire during the recession but this has dipped sharply in 2009-10. Over the next ten years, housing growth is expected to be focused in the cities of Portsmouth and particularly Southampton, Havant also has a large contribution to future housing which together with Winchester has the Major Development Area (MDA) at west of Waterlooville, whilst Fareham plans to deliver a Strategic Development Area (SDA) close to junction 10 of M27. *Figure 2.6* shows recent and future housing completions in the sub-region.

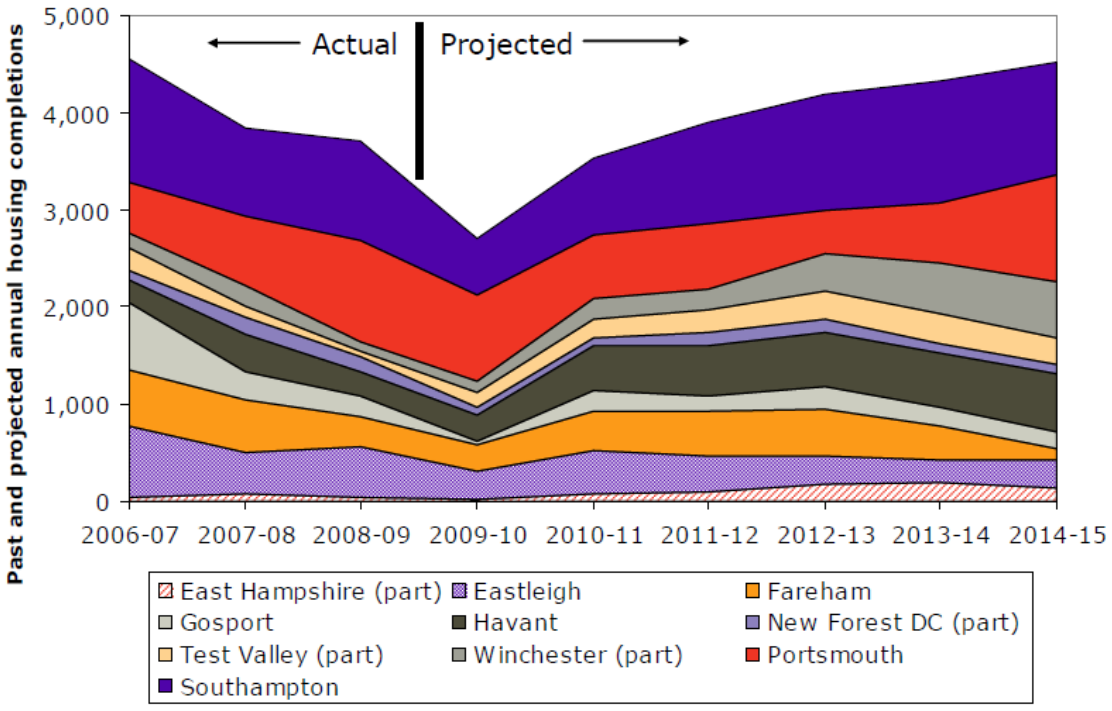


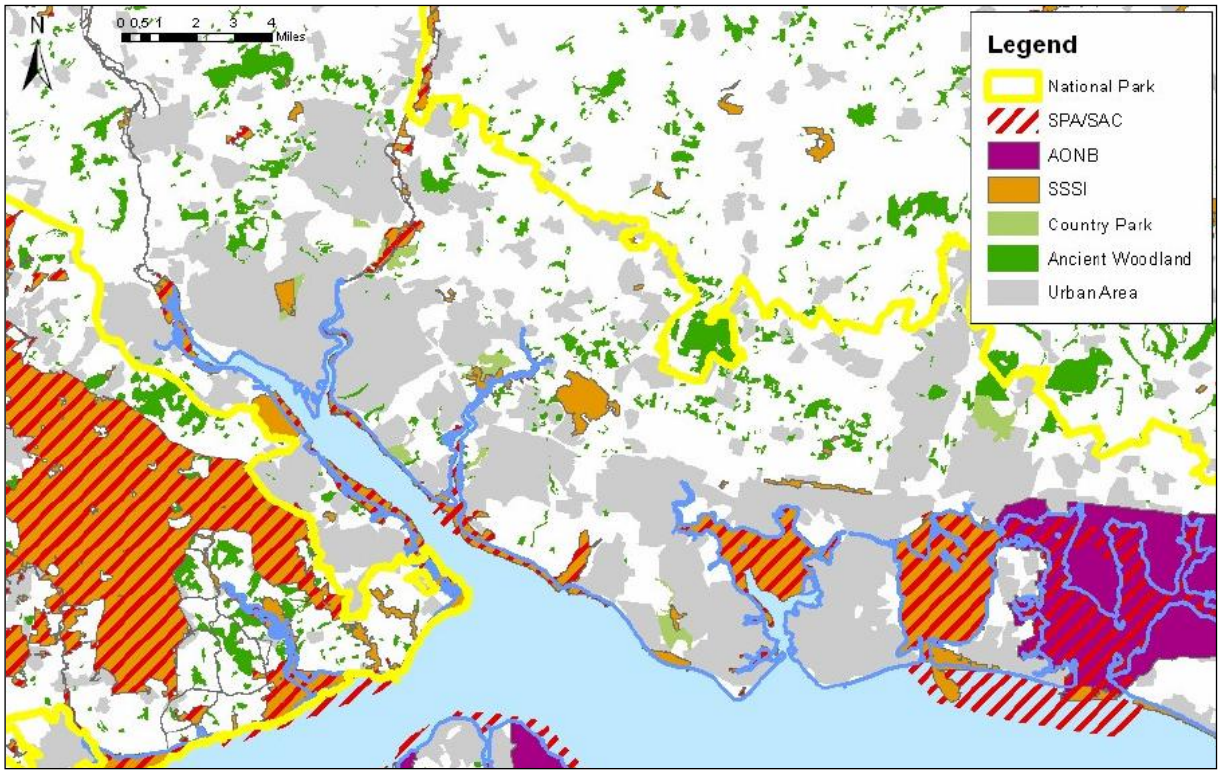
Figure 2.6: Recent and Future Housing Completions in South Hampshire

Through mapping the locations of committed and planned housing and employment it is possible to spatially identify future development and therefore challenges.

2.2.4 Environmental Context

South Hampshire is a coastal area, bounded to the South by The Solent and dissected by a number of rivers and waterways. This results in travel flows channelled through a small number of crossing points and creates a peninsula geography.

80% of the 170-mile (275km) coastline is designated, either internationally or nationally, for its nature conservation value. Map 2.6 shows the environmental designations as well as the urban extent of South Hampshire. The area is bounded to the north in part by the South Downs National Park and to the west by the New Forest National Park.



Map 2.6: Map Showing the Environmental Designations and Extent of the Urban Geography of South Hampshire

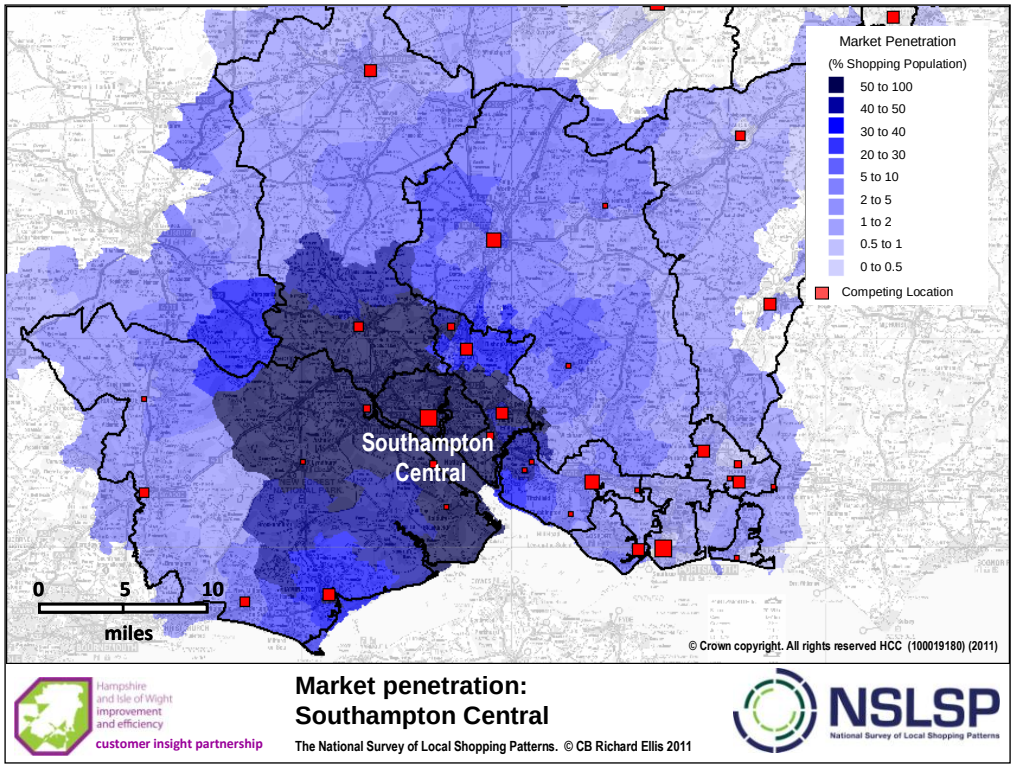
South Hampshire has a dense and complex settlement pattern, and accommodates a population of over one million people. Indeed it is the largest urbanised area in Southern England, outside London, covering 1,848 km^2. The main centres of population lie within the cities of Southampton and Portsmouth.

City Profile: SOUTHAMPTON

Lying on Southampton Water at the confluence of the Rivers Test and Itchen, Southampton is the principal city in central southern England, and the third largest city in the South East outside London. It is predominantly urban in character and the built up area extends to the administrative boundary around most of the city. The population in 2010 was estimated at 239,700 (ONS Mid Year Estimate 2010). The city also provides a home for 41,500 students attending the city's two universities

There are currently just over 98,000 homes in the city (2007), with the proportion of flats and maisonettes significantly higher than the national average.

The city is also a major regional centre for leisure, entertainment, cultural activities, shopping, higher and further education and hospitals for many of the 650,000 people who live within the city and its travel to work area. Recent research (Experian 2007) identifies the city centre as the top retail centre in the South East. This follows the opening of the West Quay Shopping Centre in 2000. The retail centre was further strengthened in 2009 with the opening of an IKEA store. The market penetration of Southampton is shown in the map below.



The city performs a significant regional role providing employment for about 120,000 people, mainly in the service sector; the largest employers being public administration, education and health followed by banking, finance and insurance.

The Adopted Core Strategy outlines significant growth office employment (322,000m^2), retail (130,000m^2), housing (16,000 units) over the 2006 to 2026 period. The majority of this development will be focussed in the city centre.

Port and marine industries are a significant direct and indirect source of employment. The Port of Southampton is a major international gateway and the deep sea port is of significant global and economic importance, making a vital contribution to the national, regional and local economy. Southampton is also a gateway to the Isle of Wight with direct vehicle and passenger ferry links. Port operations are dominated by cruise passengers, containers and cars and the Port Master Plan anticipates significant further growth in port activity over the period to 2030, as outlined in section 2.2.3.

Whilst the city centre is the focus for employment, retail and leisure facilities, this is complemented by a network of smaller centres: Shirley town centre, four district centres (Portswood, Bitterne, Woolston and Lordshill) and a number of local centres. Here, residents can find local employment, facilities and services including shops which provide everyday essential goods. These centres lie at the heart of local communities and have their own unique identity and history.

Despite the city's overall prosperity there are pockets of severe multiple deprivation where residents suffer from poor health, low qualifications, unemployment and higher crime rates.

High quality transport provision is essential to maintain and facilitate future economic growth in Southampton. The city is already well served by strategic road, rail and air links and at a local level, has a comprehensive local bus network and a large and increasing proportion of journeys undertaken by active travel modes. The Core Strategy focuses a high proportion of new development in the city centre. This will maximise the opportunity for people to use alternative modes to the private car in this highly accessible location. It also reduces the demand for travel by providing the opportunity for linked trips. However, the smaller centres also have a very important role to play, particularly as they are easily accessible by public transport and active travel modes.

Evidence produced in support of the Core Strategy proposed a balanced transport strategy to accommodate the increased travel demands that would result from new development and economic growth. Whilst this includes management and investment in essential transport infrastructure, a key component of the strategy is an extensive behavioural change programme to increase the proportion of journeys made by alternative modes to the private car. This is essential to accommodate increasing levels of travel demand, without leading to adverse levels of traffic congestion, which would be detrimental to the city's economy.

The Port of Southampton provides its own set of transport challenges. The cruise business, in particular, creates specific peaks of travel demand on the city's transport infrastructure. As a nationally important international gateway, good quality strategic road and rail links connecting the Port to other parts of the UK are important.

A number of planned and recent infrastructure projects have improved access to the Port:

- The successful "Platform for Prosperity" Regional Growth Fund bid will provide much needed road infrastructure improvements within the City to access Eastern Docks
- Widening of the M27 between junctions 3 and 4
- The recently completed Rail gauge enhancement has resulted in the proportion of containers travelling by rail increasing from 30% to 36%
- ABP have invested in improved rail infrastructure within the Port to increase the proportion of automotive traffic travelling by rail.

However, even with these initiatives, the increase in Port activity predicted in the Master Plan means that the overall behavioural change programme is essential to release adequate road capacity for port activity.

City Profile: PORTSMOUTH

Portsmouth City Centre not only serves the residents of Portsea Island but also has strong links with its hinterland, particularly Gosport, Fareham and Havant. The wider hinterland stretches to Petersfield in the north, while to the west and east the city's retail influence is constrained by the competitor cities of Southampton and Chichester respectively.

Portsmouth is home to around 3,400 businesses[3], and 87,000 workers[4]. The city's economy has strong roots in tourism, leisure and retail with Gunwharf Quays, the Spinnaker Tower, the world-renowned Historic Dockyard, and the seafront attracting visitors from across the region and beyond.

It is also home to the Royal Navy (supporting approx. 35,000 jobs and generating £650 million of income in 2007[5]), Portsmouth International Port (supporting approx. 1,600 jobs and £71 million of income/yr), and a number of expanding leaders in marine, aerospace, defence and information technology sectors such as BAE Systems, Astruim, IBM, Pall Europe and others. The University of Portsmouth in the City Centre also attracts over 20,000 students from across the UK and abroad.

South Hampshire is relatively affluent, but economic growth rates in Portsmouth are low compared to the rest of the South East and there are particular pockets of deprivation. The city is heavily dependent on the public sector for employment and will be disproportionately affected by public sector cuts. It is therefore vital that the city attracts private sector investment.

Portsmouth's retail and leisure offering is dispersed across three separate and very different centres, located between 1 and 3 kilometres apart:

- Gunwharf Quays on the waterfront, opened to the public in 2001, and offers top designer outlets, stylish restaurants and chic bars, and is adjacent to the Spinnaker Tower, the Historic Dockyard, and the new Mary Rose Museum
- City Centre, comprising Commercial Road and Cascades Shopping Centre, provides a more traditional high-street environment and is home to many of the large chain stores
- Southsea (Palmerston Road) offers a wealth of independent shops and boutiques, cafes and bars, as well as a large John Lewis store.

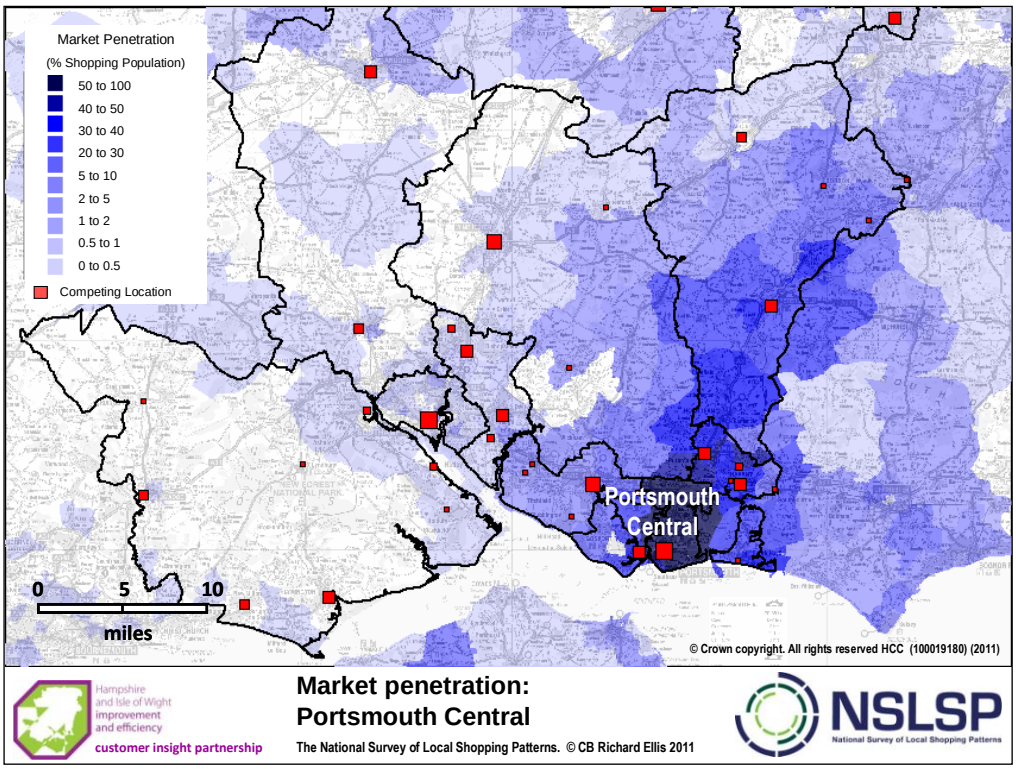
[3] VAT Based Enterprises by Broad Industry Group, 2007, Office for National Statistics (http://www.neighbourhood.statistics.gov.uk/dissemination/)

[4] Industry of employment, Office for National Statistics (http://www.neighbourhood.statistics.gov.uk/dissemination/)

[5] Socio-Economic Impact Assessment of Portsmouth Naval Base, University of Portsmouth, 2007.

Recently, the retail sector has experienced weak employment growth compared with the rest of the country[6], and there is growing evidence that Portsmouth City Centre's retail attractiveness relative to other centres within the UK is falling. The annual Centre Ranking published by MHE and Javelin confirm that the city centre's position fluctuated only marginally between 1999 and 2004, but then slipped 15 places to 88th place by 2006. By 2008 Portsmouth had fallen a further 13 places to 101st – probably moving outside the UK top 100 for the first time in its history.

The current market penetration of the retail sector in Portsmouth is shown in the map below.



Significant further regeneration is planned for the city around the retail sector, including the City Centre North development. Portsmouth City Council is working in partnership with Centros to achieve the comprehensive development of this site. This will enable Portsmouth to compete with the UK's major retail destinations.

The majority of future employment growth is expected to occur in the City Centre. The Portsmouth Plan[7] proposes a significant extension of the City Centre boundary, and 50,000m^2 of new retail floor space. This would effectively double the amount of retail floorspace in this locality and achieves a market share uplift of 3.6% for the city centre, reversing recent under-performance. In addition, the Plan proposes to reverse the recent decline in the City Centre's office market, with an additional 10,500m^2 of new office floor space, and the redevelopment of The Hard into a vibrant waterfront destination, and the provision of provision of 1,600 new homes (the largest amount of any of the Plan's strategic sites).

[6] Evidence base to Support Portsmouth LEA (DTZ, February 2011)

[7] The Portsmouth Plan - Portsmouth's Core Strategy - Pre-submission draft (2011)

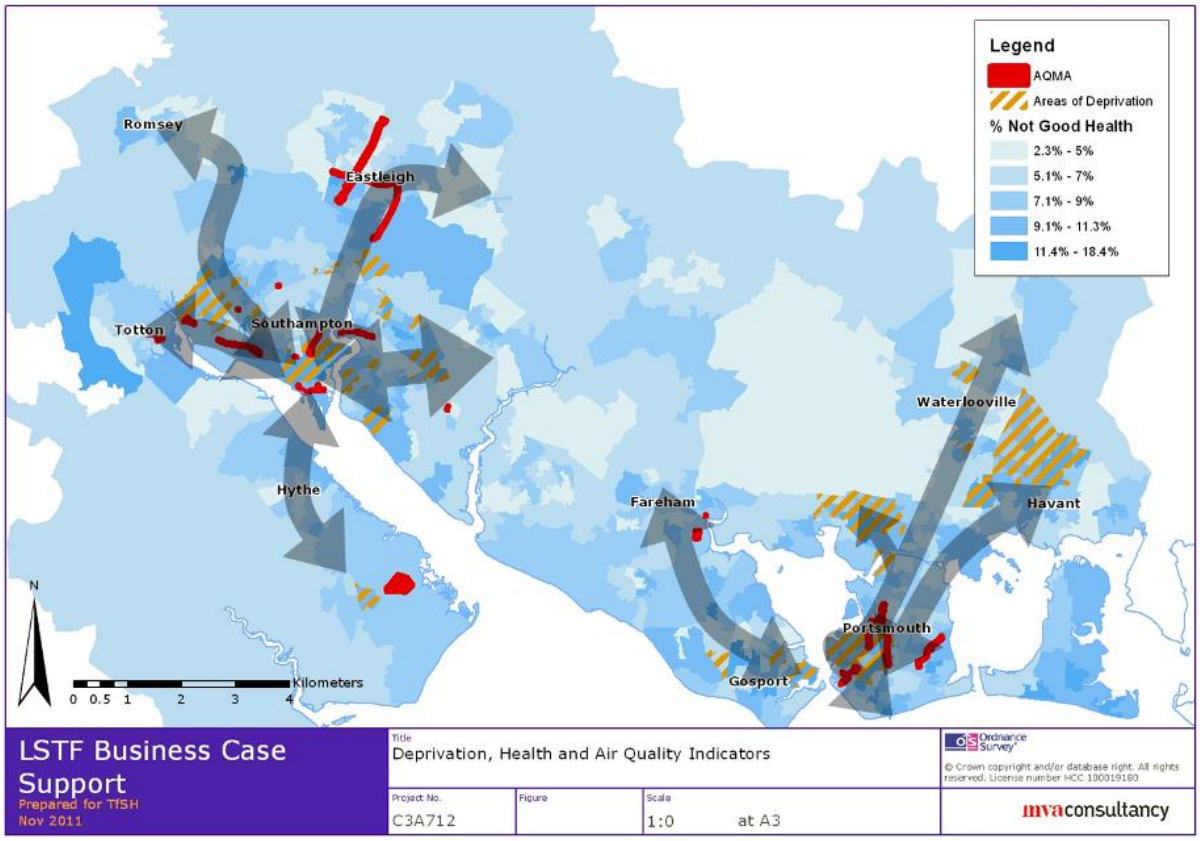
In addition to this, the Royal Navy has identified land and buildings surplus to Naval Base requirements which may be released from the south west corner of the naval base, providing income to the Ministry of Defence and reducing the long-term overheads of the Naval Base. This could potentially provide employment use related to the identified priorities referred to earlier, including core employment sectors such as advanced manufacturing and marine, several hundred additional quality homes, a four or five star hotel, additional heritage attractions and employment opportunities in innovation and science linked to the University of Portsmouth. It may also provide the opportunity to improve Portsmouth's offer to the conference market[8].

The critical mass that could be developed with the naval base land, The Hard, and any expansion of Gunwharf Quays will need to have improved connectivity through Queen Street to the current city centre, with Guildhall Square also lending itself to a tremendous future development opportunity. That connectivity can create a city centre that leads from the Victory retail park in the north to the Hard and Gunwharf waterfront, offering retail, heritage, employment, housing and visitor attractions and creating a city centre of regional significance.

South Hampshire offers a high quality of environment. However, there are significant threats. Approximately 2.5m tonnes of CO_2 are emitted as a result of road transport in South Hampshire (63% of the total for the wider Hampshire area), whilst total Carbon emissions are approximately 10m tonnes, with road transport accounting for approximately 25% of these carbon emissions.

There are 22 Air Quality Management Areas (AQMAs). The main contribution to the declaration of AQMAs is from transport: for example 11 AQMAs have been declared due to exceedences of the NO_2 air quality objective. The location of the AQMAs in South Hampshire are shown in *map 2.7*.

[8] Shaping the Future of Portsmouth – Regeneration Strategy



Map 2.7: Spatial Distribution of Deprivation, AQMA's and Poor Health in South Hampshire

2.2.5 Social Context

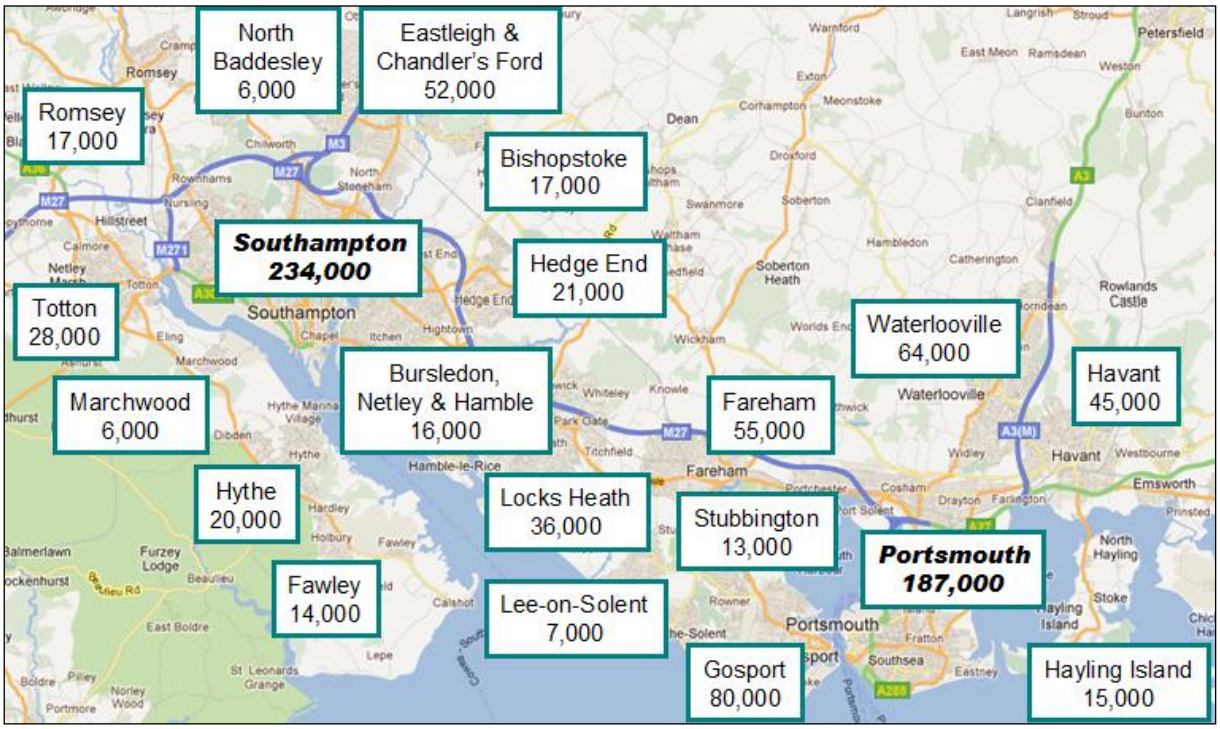
Population Profile

The population of South Hampshire is 1,019,300 (2011). Between 2001 and 2008, the population of South Hampshire grew by 4.4%. The population of the Cities has grown the fastest, with an increase of 6.6% between 2001 and 2008. The urban boroughs and the rural fringe grew at 2.6% and 3.6% respectively. Overall population growth of 4.4% between 2001 and 2008 is equivalent to population growth in the SE which also grew at 4.4%, but faster than population growth across Great Britain, which grew by 3.8%. Estimates of population by district are shown in *table 2.2.*

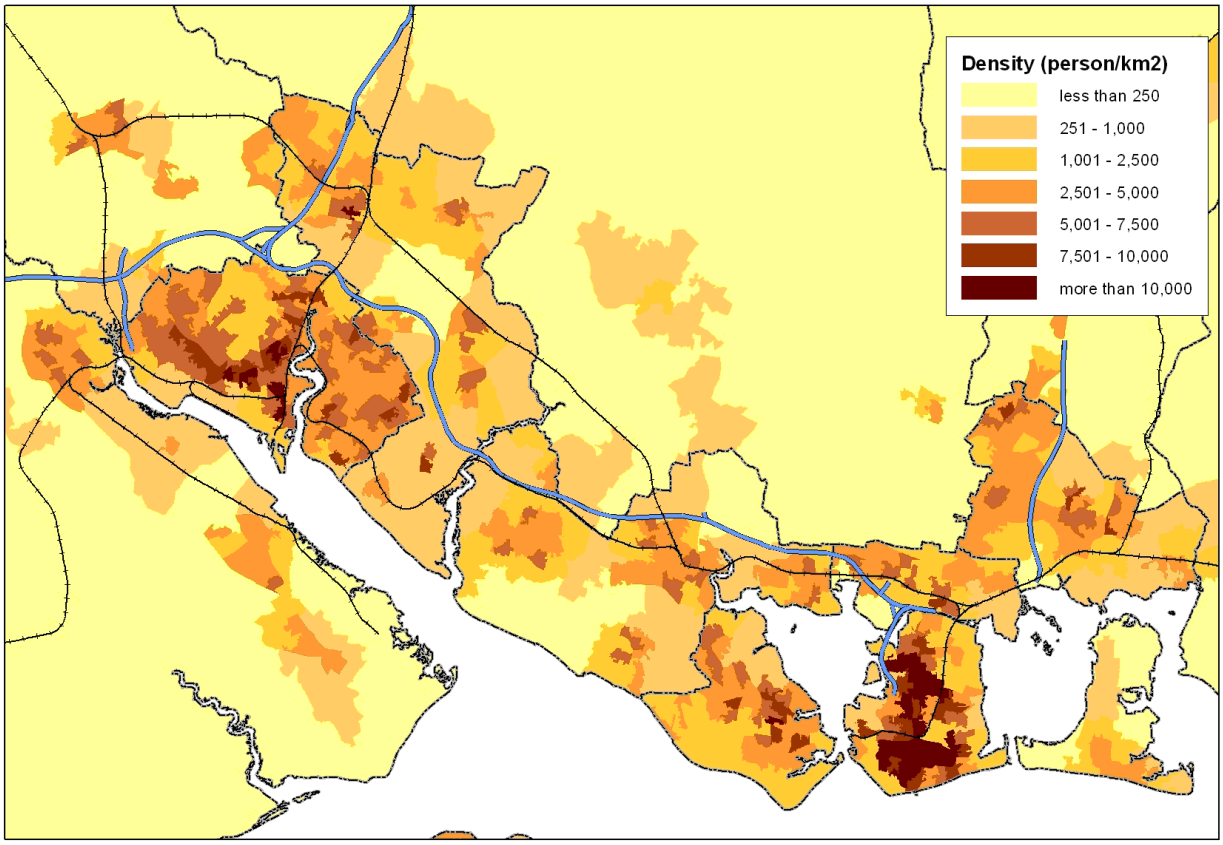
Administrative Area	Population	Estimated population within South Hampshire
Southampton	234,600	all in PUSH
Portsmouth	200,000	all in PUSH
Eastleigh	121,000	all in PUSH
Fareham	110,300	all in PUSH
Gosport	80,000	all in PUSH
Havant	117,600	all in PUSH
New Forest	175,400	63,500
Test Valley	115,400	41,800
Winchester	112,700	30,700
East Hampshire	111,700	19,800
Total		**1,019,300**

Table 2.2: Estimated Population of the TfSH Area
Source: HCC, 2011

The spread of population of the numerous town centres across South Hampshire are shown in *map 2.8*, whilst the population density is shown in *map 2.9*.



Map 2.8: Town and City Centres in South Hampshire
Source: SCC, 2011



Map 2.9: Population Density in South Hampshire (HCC, 2011)
Source: HCC, 2011

Figure 2.9 shows the changes in the population age structure of South Hampshire. There has been a considerable amount of population growth in the 20-24 age category and the 60-64 age category. The growth in the 20-24 age category is most likely to be related to student numbers given that the three major universities within the area have total student numbers of more than 60,000. Generally there has been a small movement in the population structure towards the older age groupings.

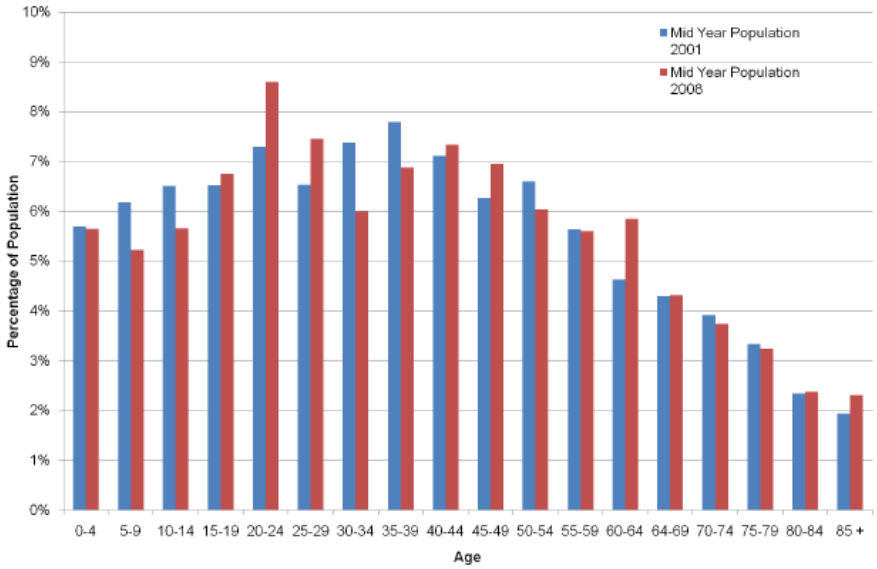


Figure 2.9: Changes in the Population Age Structure of South Hampshire
Source: 2001 Census, Mid Year Population Estimates 2008

Deprivation

Table 2.3 shows that according to the overall deprivation index the cities have a much higher level of deprivation than the urban core or rural fringe areas. For example, 66% of Lower Layer Super Output Areas (LSOAs) in the cities area are in the worst 50% of LSOAs in England, meaning that the cities area has above average levels of deprivation. The urban core has 28% of its LSOAs in the worst 50%, whilst the rural fringe has only 8%. Southampton has now fallen into the bottom 25% of the most deprived cities in the country.

	Cities	**Urban Boroughs**	**Rural Fringe**
Worst 10%	8%	2%	0%
Between 10% - 20%	14%	6%	1%
Between 20%	10%	5%	1%
Between 30%	17%	7%	1%
Between 40%	17%	7%	5%
Total in worst 50%	66%	28%	8%
Remainder of LSOAs	34%	72%	92%

Table 2.3: Spatial Distribution of Deprivation in South Hampshire
Source: Index of Multiple Deprivation, 2010

By mapping the overall index of deprivation across South Hampshire the most concentrated areas of deprivation are shown to be in and around Portsmouth (Paulsgrove, Somers Town and Fratton) and Southampton (Millbrook, Shirley Warren, Northam and Thornhill), with the darkest areas representing the most deprived areas. As well as the two cities there are also noticeable amounts of deprivation around Havant (Leigh Park), Eastleigh and Gosport. This is shown in map 2.7, above.

Gosport has two wards (Grange, Leesland, and Town wards) within the top 20% most deprived areas in the country. Gosport residents earn below the national and South East average, and the Borough has the lowest earning rates in Hampshire. The Borough has high concentrations of young people in particular wards, including Grange ward, where almost 36% of the population is under 16.

Health

Map 2.7, above, shows the indices that form the health indicator within the Indices of Multiple Deprivation. Illlll health is an important aspect of deprivation that limits and individual's ability to participate fully in society. The highest health deprivation is within the city centres of Portsmouth and Southampton with some deprivation in Gosport, Paulsgrove and Havant. Overall levels of health deprivation are similar to those for deprivation; there are some areas in the worst 25% and specific locations in the worst 5% nationally.

Table 2.4 summarises some of the health and physical activity indicators available at a district level. Southampton, Portsmouth and Gosport all have a higher % of obese children than the national average. In terms of adult obesity Eastleigh, Fareham, Gosport and Havant all have a higher percent than the national average. There are a greater proportion of physically inactive adults across much of South Hampshire with the exception of Southampton and Havant. Fareham has a particularly higher percentage of inactive adults.

Authority	% Obese children (4-5 years)	% Obese children (10-11 years)	% Obese adults	% Population physically inactive
Southampton	11	20	23	53
Portsmouth	13	22	24	61
Eastleigh	8	14	26	64
Fareham	8	17	25	66
Gosport	11	22	28	63
Havant	9	17	26	60
East Hampshire	7	17	21	62
New Forest	10	15	23	63
Test Valley	9	16	24	65
Winchester	7	13	19	65
South East	9	17	24	63
England	10	19	24	61

Table 2.4: Health and Physical Activity Indicators by Local Authority Area in South Hampshire
Source: Hampshire PCT

Physical inactivity has a high economic cost. The total economic cost of inactivity in NHS areas within the TfSH area is:

- Hampshire: £18.1m
- Portsmouth: £2.6m
- Southampton: £3.7m

2.2.6 Changes since submission of *Initial Proposal*

Subsequent to the submission of the *Initial Proposal*, South Hampshire has been successful with applications to government for a number of synergistic proposals. These include an Enterprise Zone at Daedalus in Gosport, Regional Growth Funding (to improve access to the Port of Southampton and to encourage business location at the new Enterprise Zone), for Tranche 1 of the LSTF (Southampton Sustainable Travel City), and for two major schemes in Portsmouth (Tipner and Northern Road Bridge). In addition, European Regional Development Funding (ERDF) has also been secured in Southampton to improve the efficiency of freight movements in the city to reduce carbon. Our proposals have been developed to be mutually supportive of the Portsmouth City Council tranche 2 LSTF bid, to be submitted in February. The designation of Enterprise Zone at Daedalus in Gosport offers an opportunity to align funding to maximise a return on investment.

The Solent LEP Enterprise Zone at Daedalus aims to host a group of advanced manufacturing and technology businesses focused on the marine, aerospace and aviation sectors. The objectives are to:

- Create 650 new jobs by 2015
- Create up to 3,700 additional jobs on the EZ by 2026, contributing more than a third to the Solent LEP's additional jobs target
- Promote a manufacturing and technology cluster based on marine, aviation and aerospace
- Catalyse the regeneration of Gosport.

The main benefits of an Enterprise Zone at Daedalus include:

- A 100% business rate discount worth up to £275,000 over a five year period, for businesses that move into the Enterprise Zone during the course of this Parliament
- All business rates growth within the zone for a period of at least 25 years will be retained and shared by the local authorities in the LEP area to support their economic priorities
- Government and local authority help to develop simplified planning approaches in the zone
- Government support to ensure superfast broadband is rolled out in the zone.

2.2.7 Summary

South Hampshire is the largest urban area in Southern England (outside London) and is dominated by its coastal geography. The economy is underperforming in comparison to the rest of the South East of England, with the cities underperforming in their role as drivers of the local economy. Our town centres and Gosport, in particular, have seen contraction in employment, whilst the recession and continued fragile economy has resulted in increased levels of unemployment, particularly for young people.

The areas that stand out as having particularly acute problems across a range of measures are Southampton, Portsmouth and Gosport, with significant pockets of deprivation, economic inactivity and health problems.

The change in the global macroeconomic environment has reduced the likely scale of future economic growth in South Hampshire. In response, South Hampshire has identified a preferred growth trajectory along with actions to ensure its realisation. There is a need to focus on our assets, and in particular our international gateways and city centres, recognising the significant role they perform for the local and UK economies. The sectoral strengths where South Hampshire has a competitive advantage have been identified, many of which are located in our cities, particularly those that will drive employment growth. Attention on these actions is required to be focussed in the period 2011-15 to ensure that the preferred growth scenario is attained.

The population of South Hampshire is forecast to grow at a high rate, and there is a need to plan sustainably for the significant level of new development that South Hampshire is to deliver. The *Cities First* principle should help underpin sustainable economic growth, and reverse the migration of commerce from the urban core to the M27 corridor, and so act to regenerate our cities enabling them to drive forward recovery.

The national policy imperatives are for economic growth and carbon reduction, and local ambitions accord with this. There is a need to align investment programmes around common goals and the strong history of partnership working and strategic leadership in South Hampshire provides the framework within which this will occur. Recent funding successes are joined-up and form part of the plan to ensure sustainable economic growth in South Hampshire.

2.3 Developing Transport Solutions in South Hampshire

The Sub-Regional Transport Model (SRTM) – described in the Economic Case - is being used to develop a Long Term Strategic Implementation Plan (LTSIP) for South Hampshire. Our LSTF proposals form part of, and are framed by, the LTSIP. The development of the LSTIP follows the steps set out in webTAG unit 2.1, shown in *figure 2.10*, below. It is noted that webTAG unit 2.1.1C proposes a slight revision to the approach set out below. However, our approach is also consistent with the revised process, in that it will increase the emphasis on evidencing the need for interventions.

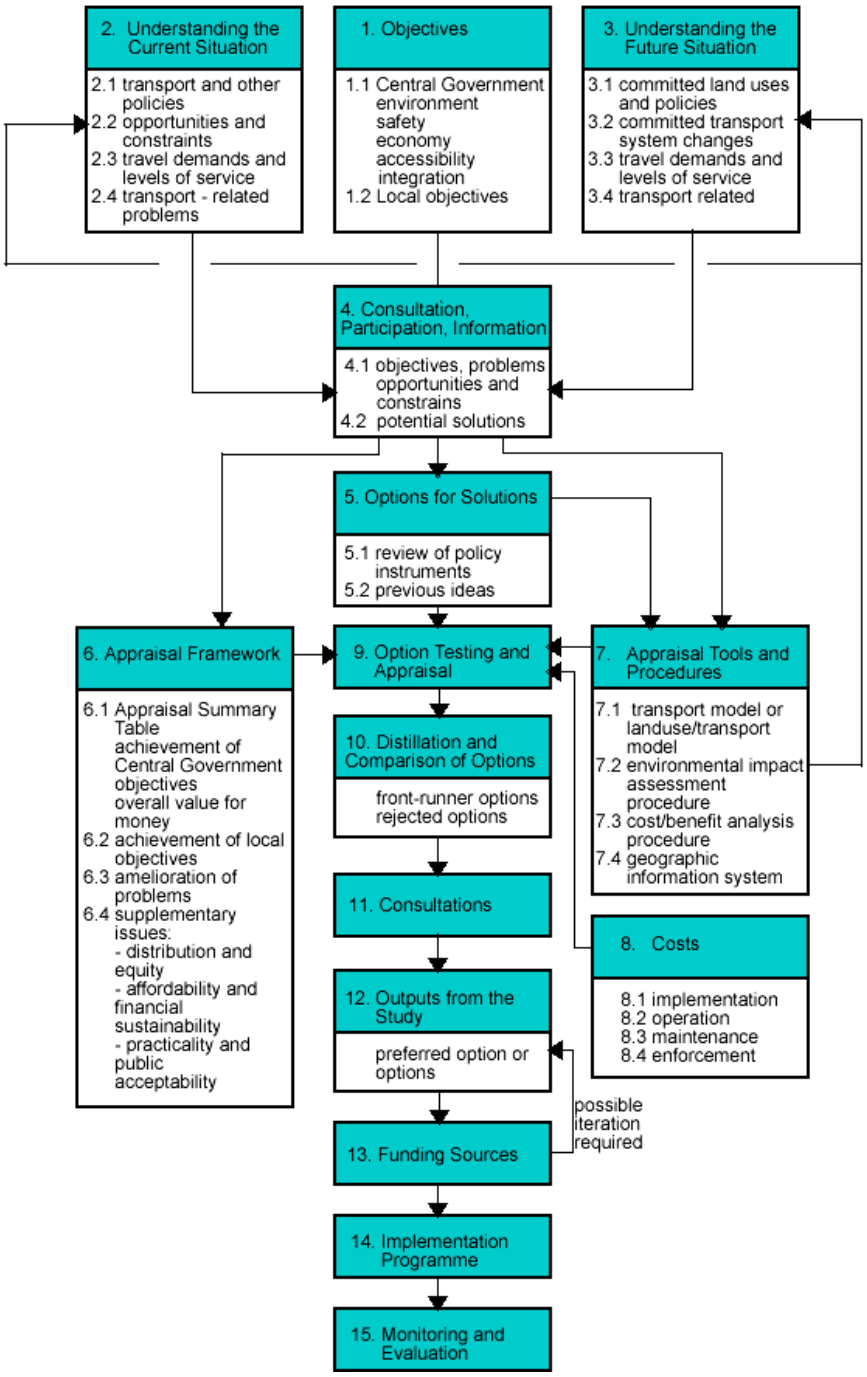


Figure 2.10: Study Approach Steps (webTAG unit 2.1)

Consideration of current and future transport-related problems needs to be undertaken within the context of central government and local objectives, policies and ambitions. Section 2.1 summarises the key relevant national and local policy drivers. In consideration of the national and local policy context, and in consideration of output from past work, we have identified a set of sub-national outcomes for South Hampshire. These outcomes are the things we want to happen and where transport has a role to play. The outcomes are critical as they provide the context within which the transport barriers can be identified, which in turn generate objectives that direct transport solutions. This process chain is mapped in figure 2.11, below.

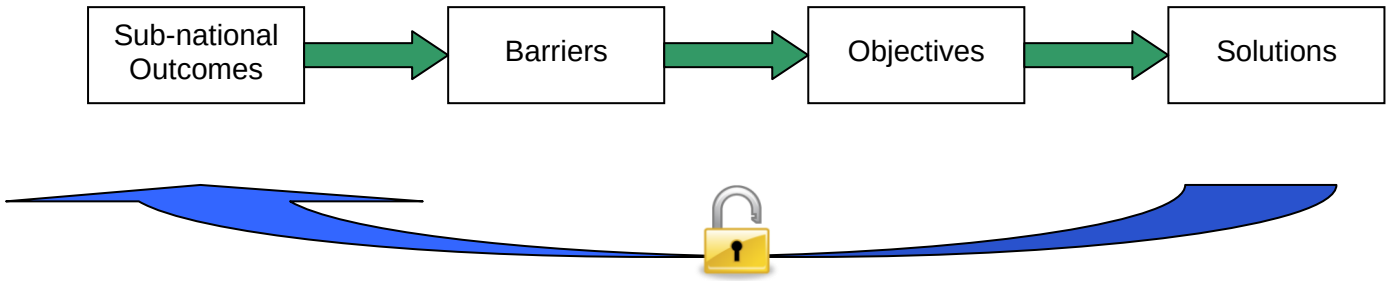


Figure 2.11: Process Chain from Outcomes to Solutions

The outcomes initially identified in the *Urban South Hampshire 2014-19 Delivery Strategy*[9] have been reviewed and refreshed within the context of current policy, and following an engagement workshop in September 2011. As a result of this review the sub-national outcomes that the LTSIP and the LSTF proposals aim to realise are identified as:

Core sub-national outcomes
O1 - Strengthened international gateways in South Hampshire, fulfilling their role in supporting the local and national economy.
O2 - Delivering planned housing and employment growth in existing economic centres first.
O3 - The transport sector contributing to South Hampshire achieving its commitment to reduce greenhouse gas emissions (especially Carbon).
Supporting sub-national outcomes

[9] The Urban South Hampshire 2014-19 Delivery Strategy was published in May 2010. It identified gaps in evidence and broad level interventions required to realise the sub-national outcomes.

O4 - Reduced social disparities, supporting cohesive and inclusive communities and improving the quality of life for South Hampshire residents.
O5 - Delivering continuous economic growth through the implementation of the strategic and major development areas that will ultimately deliver housing and employment targets.

These outcomes aim is to support our economic assets and facilitate housing, employment and economic growth in a sustainable manner, and in particular in a way that also reduces carbon output. These are covered by our three core outcomes. The core outcomes are supported by two further outcomes. The first of these seeks to improve the quality of life of our residents through, in particular, improving their employment and training opportunities, but by also improving their access to other services. The final outcome recognises that not all of the significant growth planned for South Hampshire can be delivered on brownfield sites and that strategic employment and housing sites are also planned and will be supported by sustainable transport interventions.

How these outcomes map against national and local policy drivers is set out in *table 2.5*, below.

National	Solent LEP / PUSH	LTP3 Joint Strategy	Sub-National Outcomes
Environment	Reduce emissions (including carbon) from the transport sector Improve levels of physical activity and reduce obesity through active travel	Widening travel choice to offer reasonable alternatives to the private car, moving towards a low carbon economy Mitigating the adverse impacts of transport activity on people, communities and habitats	**O3** - The transport sector contributing to South Hampshire achieving its commitment to reduce greenhouse gas emissions (especially Carbon).
Safety		To improve road safety	
Economy	Develop a growth hub and strategic based clusters Strengthen visitor economy Invest in skills Enabling the growth of international gateways Realise potential of cities Focus on infrastructure priorities Support enterprise, new business starts and business survival Establish a single inward investment and place market function Continue to implement innovation in delivery and funding Reducing unemployment and deprivation	Managing the existing transport network to ensure that journey time reliability is maintained Ensure reliable transport access to the international gateways Ensure timely delivery of transport infrastructure to support housing growth and regeneration Secure funding to deliver transport improvements	**O1 -** Strengthened international gateways in South Hampshire, fulfilling their role in supporting the local and national economy. **O2** - Delivering planned housing and employment growth in existing economic centres first. **O4** - Reduced social disparities, supporting cohesive and inclusive communities and improving the quality of life for South Hampshire residents. **O5** - Delivering continuous economic growth through the implementation of the strategic and major development areas that will ultimately deliver housing and employment targets.
Accessibility	Improve sustainable access to jobs and facilities Reduce unemployment and deprivation where levels are highest through improved access		**O4** - Reduced social disparities, supporting cohesive and inclusive communities and improving the quality of life for South Hampshire residents.
Integration			**O4** - Reduced social disparities, supporting cohesive and inclusive communities and improving the quality of life for South Hampshire residents.

Table 2.5: Mapping the Sub-National Outcomes against National and Local Policy

Safety is not identified explicitly within the sub-national outcomes, but is implicit in all that we do.

The work-programme for the development of the LTSIP is progressing well. A workshop was held on September 6th 2011, in which stakeholders were invited to comment on the proposed outcomes, validate the current and future transport problems identified by the SRTM, and begin to consider solutions (step 4 in figure 2.10). Subsequently option generation (step 5 of figure 2.10) has taken place, and the appraisal framework and appraisal tools (the SRTM) have both been identified (steps 6 and 7 of figure 2.10). As this Business Case is being written we are at the option testing stage (step 9 of figure 2.10), which includes the testing of our LSTF proposals.

As stated, our LSTF proposals form part of the LTSIP and the option development of the LSTF proposals represented an early phase of optioneering for the LTSIP to fit in with the deadline for the submission of the LSTF *Initial Proposal*. The option generation and sifting process that has resulted in our LSTF package set out in this Business Case is described in section 2.6. The LSTF package is a targeted approach; both spatially and by segmenting traveller types. The LSTF cannot cover all the interventions required to meet the objectives and generate the outcomes. It is a start that will be expanded in subsequent years of investment to achieve the LTSIP and the desired outcomes.

Where the LSTF workstream sits within the proposed packages to be tested through the LTSIP process is shown in *figure 2.11*.

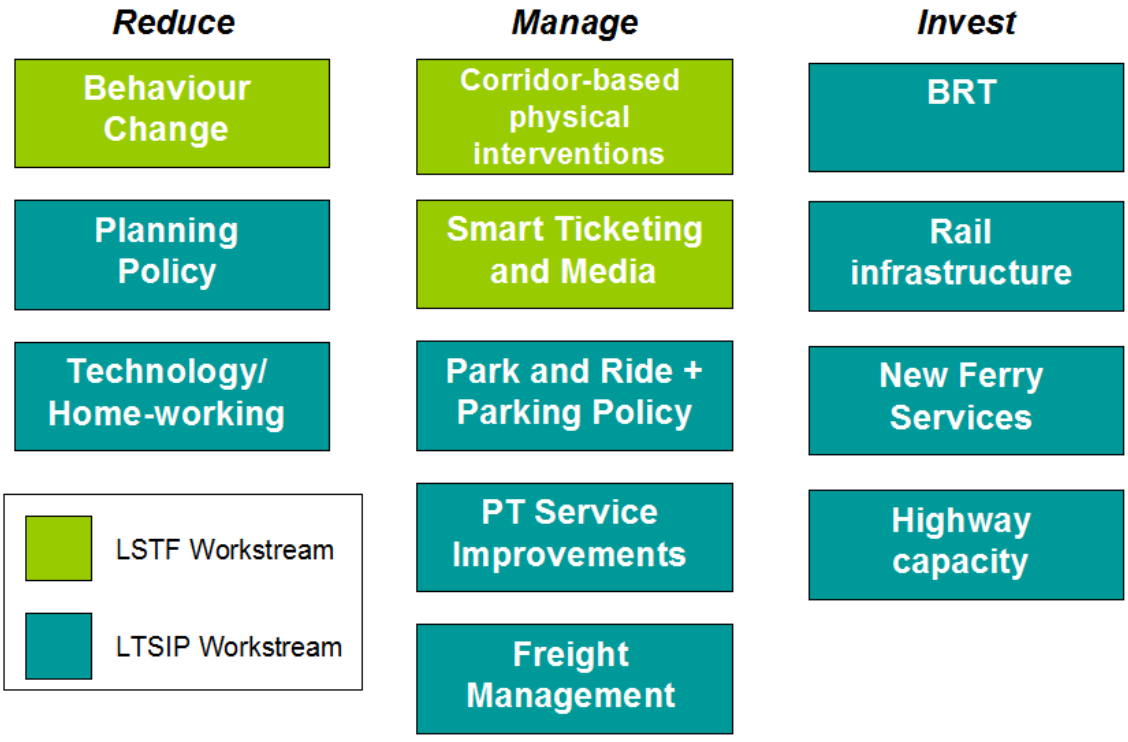


Figure 2.11:
Where the LSTF Workstream sits within the proposed packages to be tested through the LTSIP Process

The SRTM was available for some rudimentary early testing of the interventions outlined in the *Initial Proposal* and this testing helped justify their inclusion within the package. Subsequently our understanding of the current and future situation has improved through output from the SRTM and so we have been able to refine our LSTF proposals. In addition, the proposals were also endorsed by stakeholders at the workshop held on 6th September 2011.

The LSTF proposals that form this Business Case have been prioritised for early testing as part of the development of the LTSIP, in order to accord with the 20th December Business Case submission deadline.

The LSTIP is programmed to be published in Spring 2012.

2.4 Current and Future Transport-Related Problems in South Hampshire

Section 2.4 Headlines

Current Transport Situation

- Over 3.2 million person trips starting and/or finishing in the TfSH area are made each day
- Just under 2.8 million of these are contained within the TfSH area
- The majority of trips are made by car (70%)
- The cities and Gosport have high levels of active mode use, whilst public transport use is also highest in the two cities
- Use of the car dominates journey to work trips (59.9%)
- 68% of all highway trips are under 5km
- 50% of M27 traffic flows between 1 and 4 junctions

- 62,646 daily public transport boardings in the TfSH area (Southampton 34% and Portsmouth 25%)
- There are a number of sections of the bus network where bus speeds are less than 10kph

- Active modes account for 25% of all daily trips within the TfSH area
- The two cities have high levels of active mode use in absolute terms, although Gosport has the highest active mode use as a proportion of all its trips (37%)

- High containment in cities
- Only Portsmouth, Eastleigh and Winchester are net importers of labour
- While Gosport's level of containment is the highest (outside of the two cities), it is one of the largest net exporters of labour in percentage terms

- 236.5 Tonnes of carbon are emitted from the transport sector each day in the AM peak
- South Hampshire has 20 designated Air Quality Management Areas

Future Transport Situation *(do-nothing scenario)*

- Total trips increase by 11% between 2010 and 2026 (Car 13%; public transport 3%; active modes 5%)
- Increased demand for the highway network is particularly concentrated on the M27, M3 and A3(M), but also on radial routes into Southampton, Gosport and Portsmouth
- Vehicle time spent in queues is forecast to increase by 53% between 2010-26 (greatest on the M3 and M27 and also on the radial routes into our cities)

- Overall demand for public transport is forecast to increase by just 3% between in 2010 and 2026
- AM peak boardings are forecast to increase for rail (9%) and ferry (1%), but fall for bus use (-1%)
- Incidences of bus delays on the network will increase, particularly on the radial routes into our cities

- Emissions from the transport sector will rise
- Carbon and carbon monoxide levels will return to 2010 levels by 2026, after a fall resulting from technological advances

- From 2014, transport constraints reduce growth of both population and employment. This will impact on the contribution that South Hampshire can make to the UK economy.

This section presents data on the current and future use and performance of the transport networks in South Hampshire. Data, unless stated otherwise, has been obtained from the SRTM (described in the Economic Case) with a base year of 2010. The Future situation is shown for 2014, 2019, 2026, and in some instances 2036.

2.4.1 Current Transport Situation

Just over 3.2million person trips starting and/or finishing in the TfSH area are made across all modes each day. Just under 2.8million of these are contained within the TfSH area. The majority of these (70%) are made by mechanised modes, of which most are by car.

Table 2.6 summarises mode share, and how it varies by time of day:

Mode	AM 07:00-10:00	IP 10:00-16:00	PM 16:00-19:00	1900-0700	All Day
Highway	401,528	895,367	513,128	459,435	2,269,457
Public Transport	34,388	63,720	32,599	20,148	150,856
Active Modes	161,578	354,363	145,037	140,220	801,197
Total	597,494	1,313,450	690,764	619,802	3,221,510

Table 2.6: Summary of Total Travel Demand (trips per day) by Mode, Starting and/or Finishing in the TfSH area

The extent to which mechanised modes dominate travel in South Hampshire is immediately apparent in *figure 2.12*, as is the importance of active modes to the overall picture.

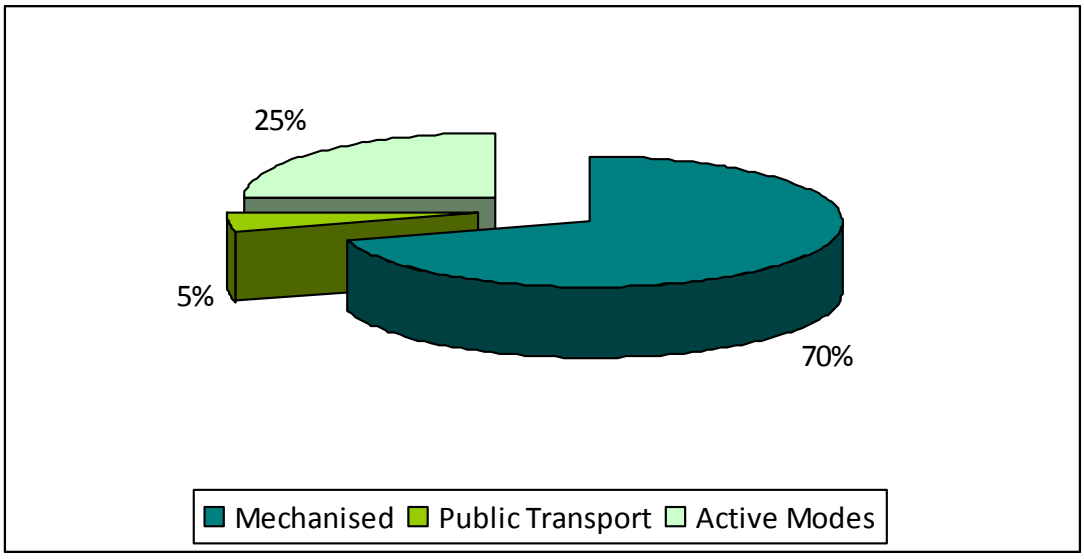


Figure 2.12: Overall Mode Share in South Hampshire (2010)

Figure 2.13 shows annual trip rates per head of population for authority area in TfSH, by mode. The cities and Gosport have particularly high levels of active mode use, whilst public transport use is also highest in the two cities. Havant and Eastleigh have a particularly high level of car use per head, as do those more rural districts only partly within the TfSH area (identified in figure 2.13 by "core").

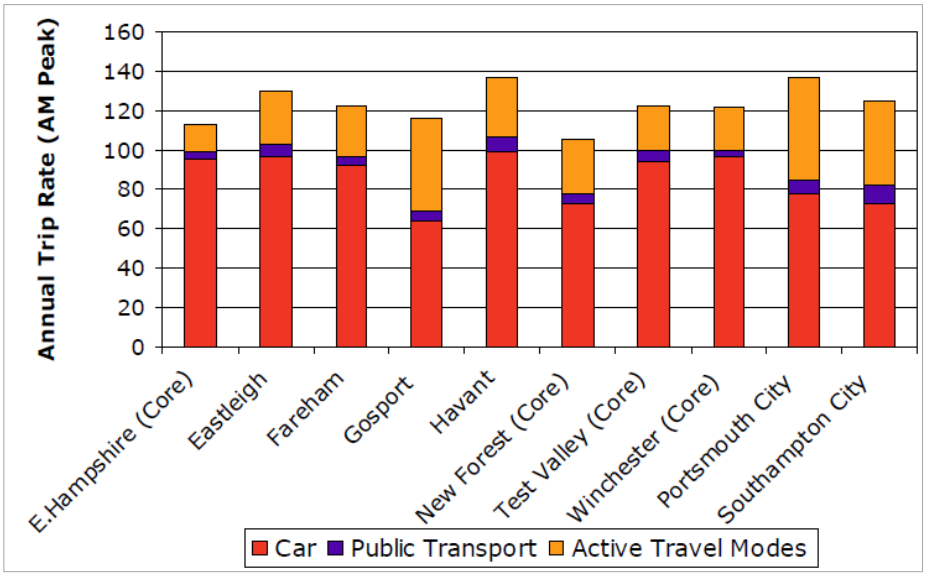


Figure 2.13: Annual Trip Rate in the AM Peak by Mode

Despite the large mode share for active modes for all trips, their share of journey to work trips is far lower. *Figure 2.14* shows the mode share for journey to work at the 2001 census. The dominance of the car for such trips is clear (59.9%), although walking (10.6%) and cycling (4.6%) combined (15.2%), make up the second largest segment. The proportion of people working from home is likely to have risen since 2001, and the results of the 2011 census are expected to confirm this.

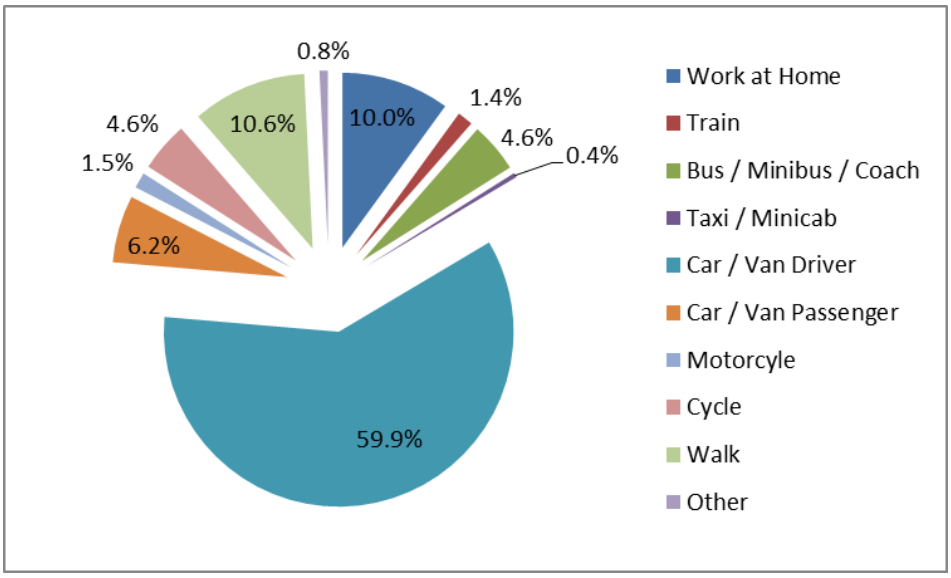


Figure 2.14: Journey to Work Mode Share (2001 Census) in South Hampshire

Mechanised Travel

Almost 5.5m vehicle kilometres are travelled each day within South Hampshire (12 hour period), whilst the average trip length of these journeys is just over 21 kilometres. The volume of vehicular traffic on our roads is increasing journey times and delays. *Figure 2.15* shows the total number of vehicle hours spent on our highway network in each period each day, split between Link Cruise Time (free flow conditions), Transient Queues (Time spent waiting for the next green light), and Over Capacity Queues (Where delay lasts more than one traffic signal cycle). A significant proportion of vehicle journey time is spent in queues, particularly in the two peaks. This has negative implications for productivity and carbon reduction.

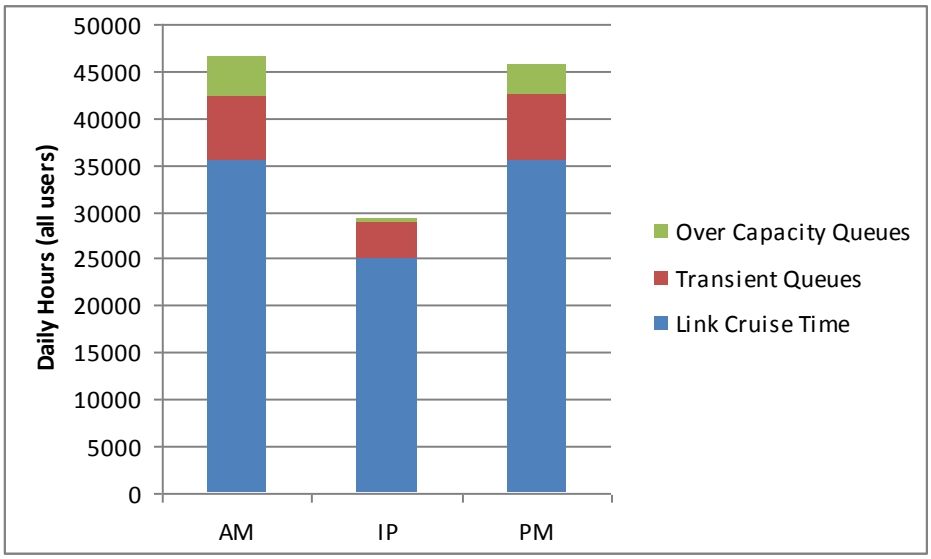


Figure 2.15: Daily (12 hr) Vehicle Hours Spent on the Highway Network (HA and Local)

Availability of a car for journeys is high amongst South Hampshire's residents, with 48.4% of people having full access to a car. 43.1% share access to a car, whilst just 8.6% of residents do not have access to a car.

The South Hampshire highway network is dominated by the M27. The M27, whilst a strategic road, performs an important local distributor function. Evidence of the latter is shown in *figure 2.15.* This shows the number of junctions travelled by traffic on the M27. 30% of all traffic travel only 2 junctions, with over 50% travelling between 1 and 4 junctions. The largest single proportion of all traffic travels only 1 junction on the motorway (15.5%).

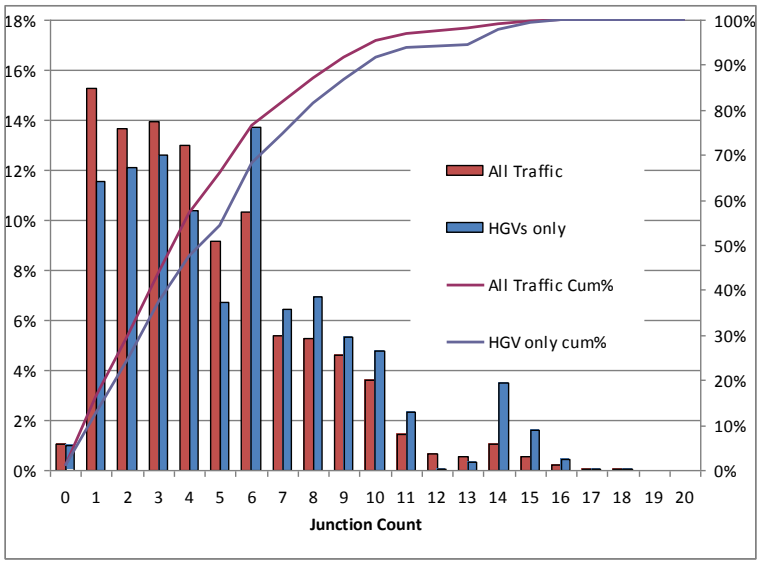


Figure 2.15: Number of Junctions Travelled by Traffic on the M27

Examination of the highway trip length distribution for the TfSH area shows that short trips make up a sizeable proportion of highway network demand. This is shown in *figure 2.16*, and highlights the high proportion of highway trips under 5km (68%), particularly in densely populated areas like Portsmouth and Southampton.

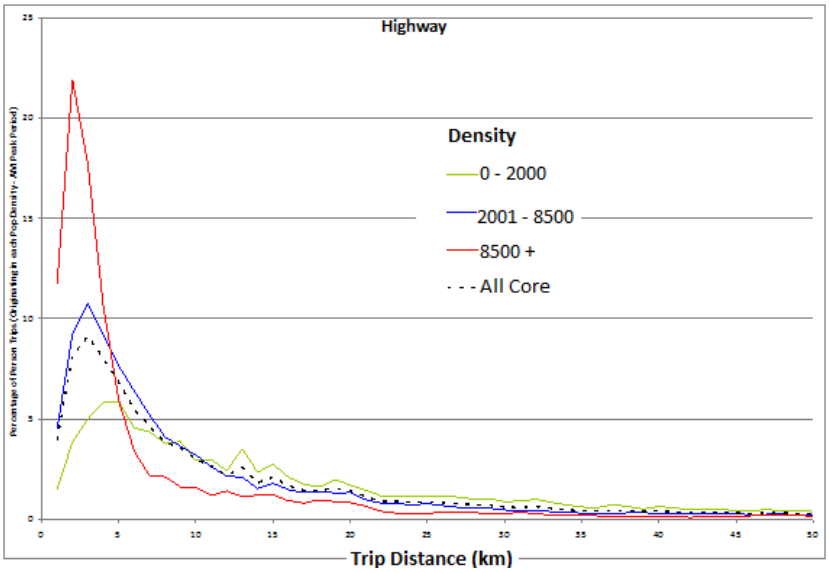


Figure 2.16: Trip Lengths on the Highway Network by Population Density

Continued use of valuable road space for short trips is a major barrier to sustainable economic development in South Hampshire as it will adversely affect all trips using the network, including the strategically important movements to the international gateways and economic centers. There is an opportunity for these short vehicular trips to migrate to public transport and active modes.

Public Transport

There are 62,646 daily public transport boardings (12 hour period) in the TfSH area. The split by time period and public transport mode is shown in figure 2.17. The majority of public transport use is undertaken in the two peaks, primarily for journeys to work and education.

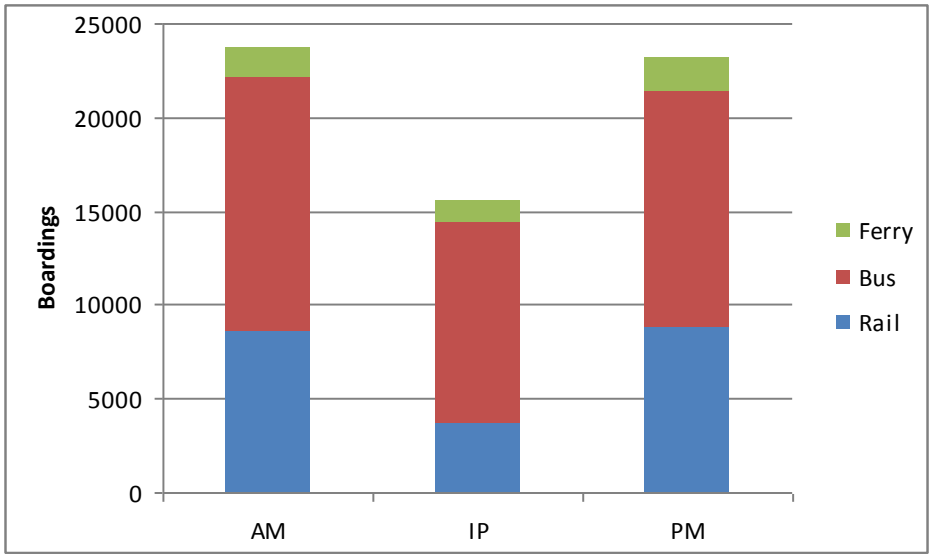
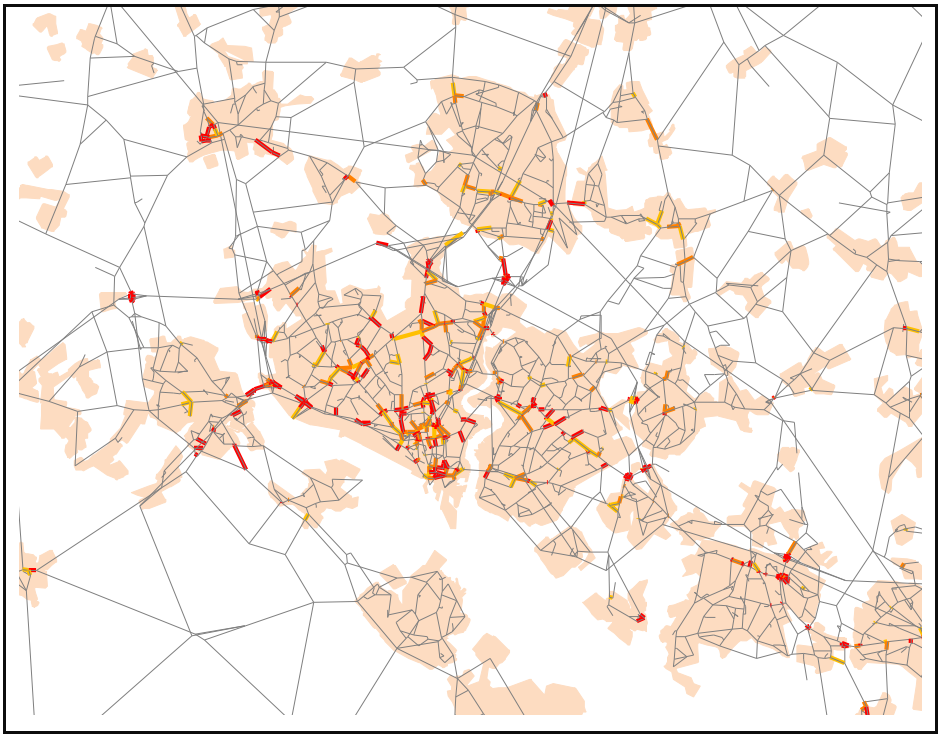


Figure 2.17: Public Transport Daily Boardings (12 hour period) by Period and Mode

Figures 2.18 and *2.19* show sections of the public transport network where bus speeds are less than 10kph in the western and eastern parts of the TfSH area, respectively.



***F**igure 2.18: Sections of the Western Public Transport Network Where Bus Speeds are Less Than 10kph (2010)*

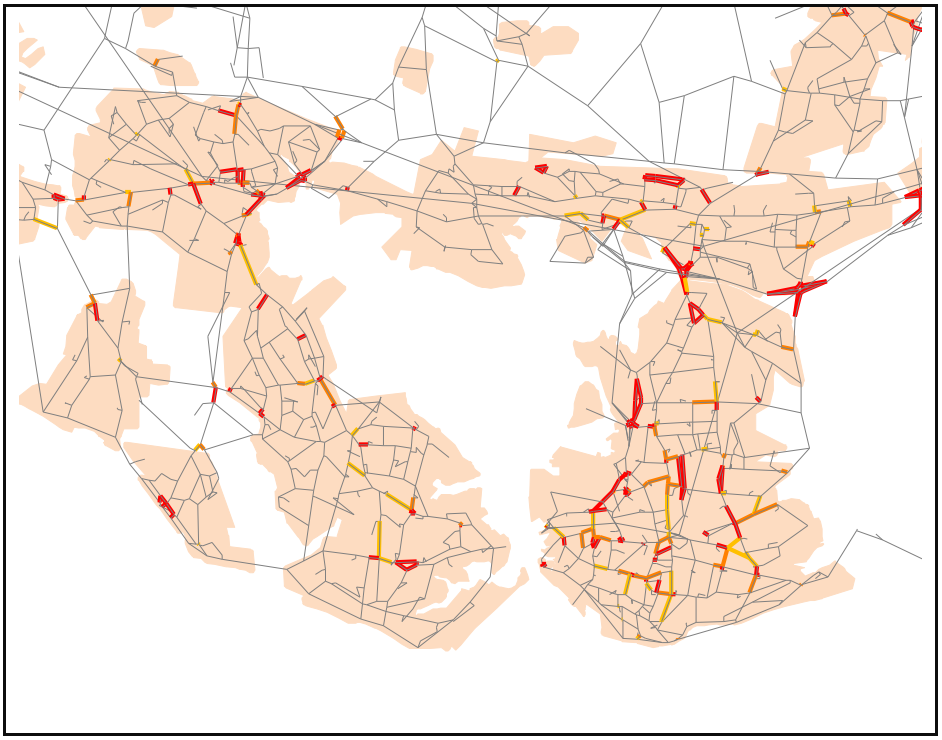


Figure 2.19: Sections of the Eastern Public Transport Network Where Bus Speeds are Less Than 10kph (2010)

Public transport use varies by area in accordance with network provision. Network provision tends to be highest in the more urban areas, particularly within the two cities. That said, public transport use in Southampton is significantly higher than in Portsmouth, despite similar populations and bus service provision. The number of daily boardings, by origin, in the AM peak is shown in *table 2.7*, whilst the proportion of total TfSH area daily boardings in the AM peak by trip origin is shown in *figure 2.20.*

Trip Origin	Daily Boardings in the AM Peak
New Forest	3,723
Test Valley	2,280
Southampton	38,086
Eastleigh	10,507
Winchester	1,390
Fareham	7,225
Gosport	5,024
Portsmouth	28,050
Havant	13,549
East Hampshire	851

Table 2.7: Daily Public Transport Boardings in the AM Peak by Trip Origin

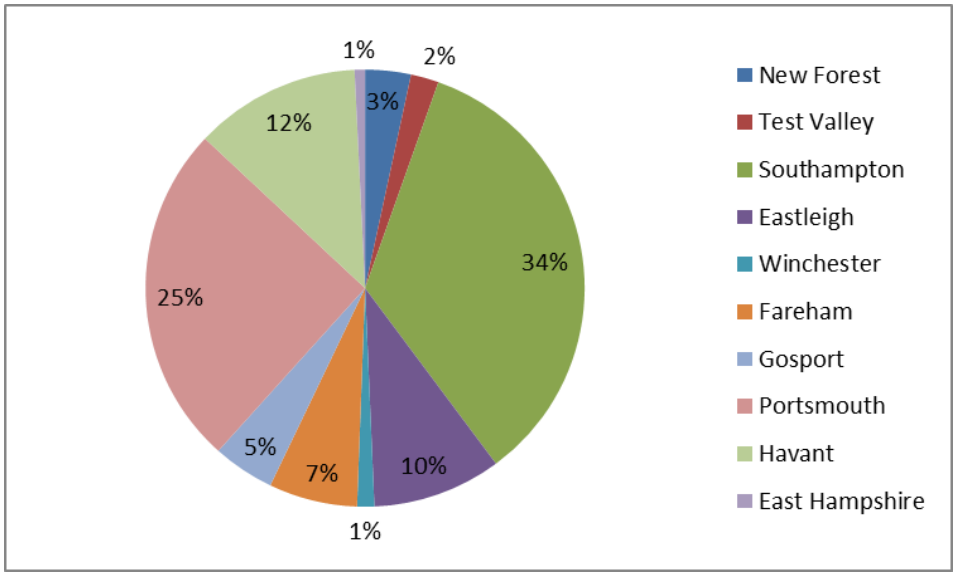
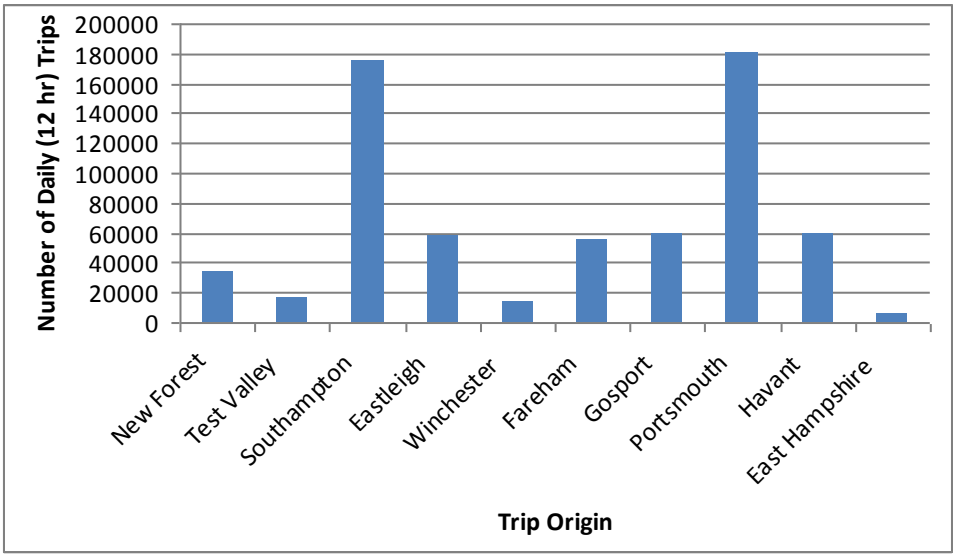


Figure 2.20: Proportion of Total TfSH Area Daily Boardings in the AM Peak by Trip Origin

Active Modes

As shown above, active modes account for 25% of all daily trips within the TfSH area. The use of active modes varies by area, with Southampton, Portsmouth and Gosport having particularly high levels (*table 2.7*, above). The variability of active mode use by authority area is presented in *figure 2.21*, which shows the annual trip rate in the AM peak by mode.



2.21: Daily (12hr) Active Mode Trips by Origin

Figure 2.22 shows active mode trips as a proportion of all trips by authority area. This shows that the two cities have high levels of active mode use, although Gosport has the highest active mode use in the TfSH area. It's low-lying geography and dense population assists active mode use and presents an opportunity for further growth in this sector.

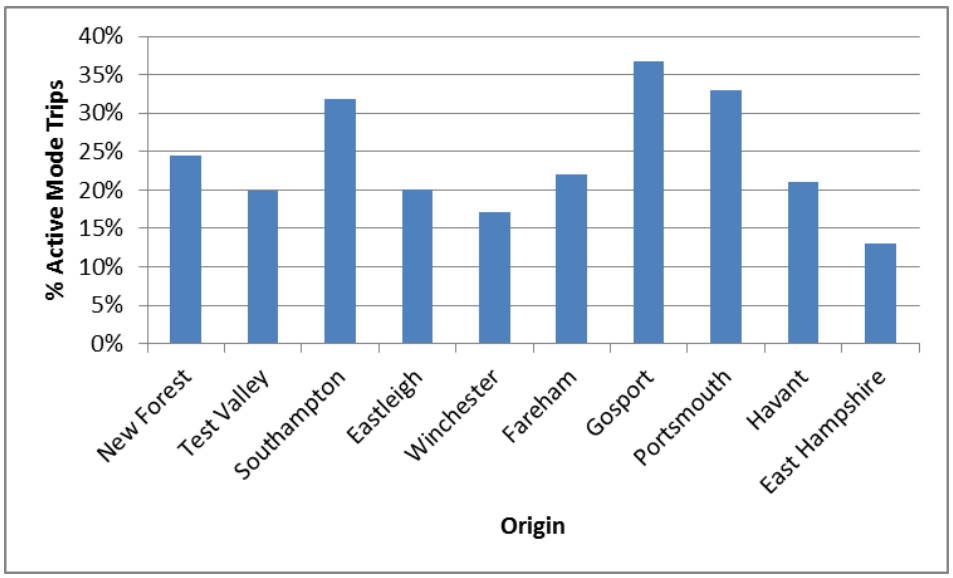


Figure 2.22: Active Mode Trips as a Proportion of all Trips by Origin

As expected the vast majority of trips by active modes are short in length. Trip length by active modes in three different population density area types in South Hampshire is shown in figure 2.23. This shows that active mode trip length is broadly similar irrespective of density type; although a higher volume of active mode trips are undertaken in the more densely populated areas.

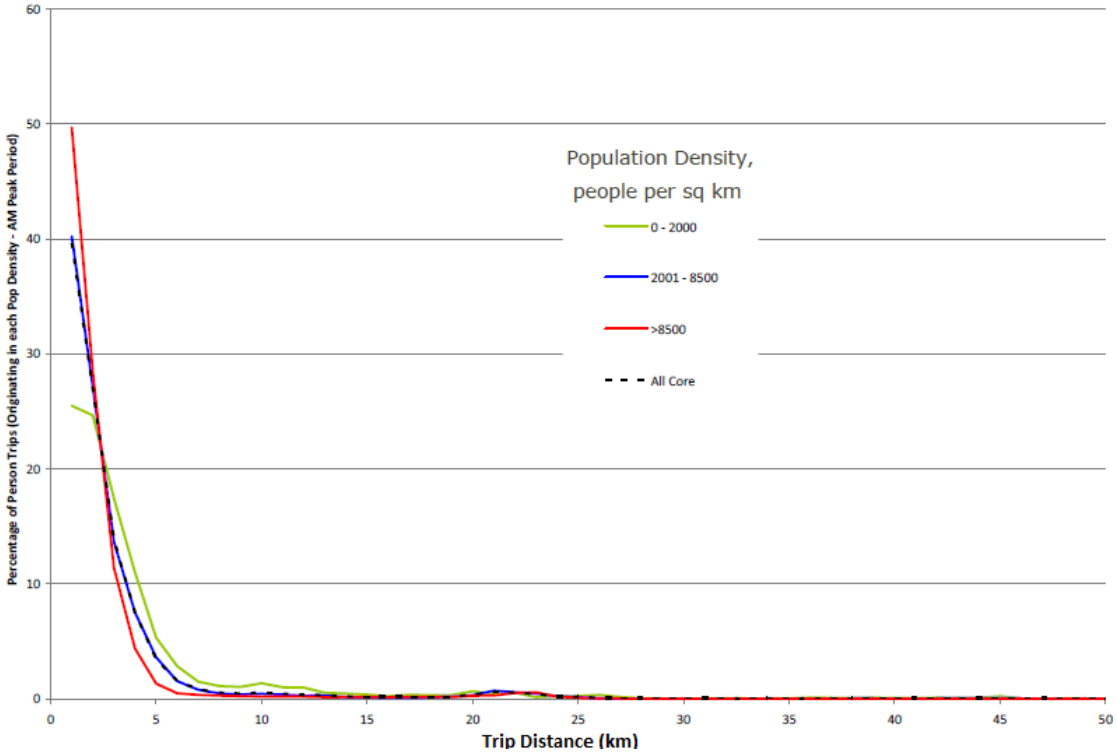


Figure 2.23: Trip Length by Active Mode and Population Density

Commuting Patterns and Containment

A substantial proportion of the demand for travel is for journeys to work. The relative locations of population and employment will clearly impact on how far people have to travel to work and how they travel. In areas that are more self-contained, trip lengths will tend to be shorter and patterns of travel therefore more sustainable.

Just under half of AM peak commuting trips have both home (production) and work (attraction) in the same district. The level of containment (defined as commuting trips internal to the district divided by the total trips generated by the district) and out-commuting by district is shown *in figure 2.24.*

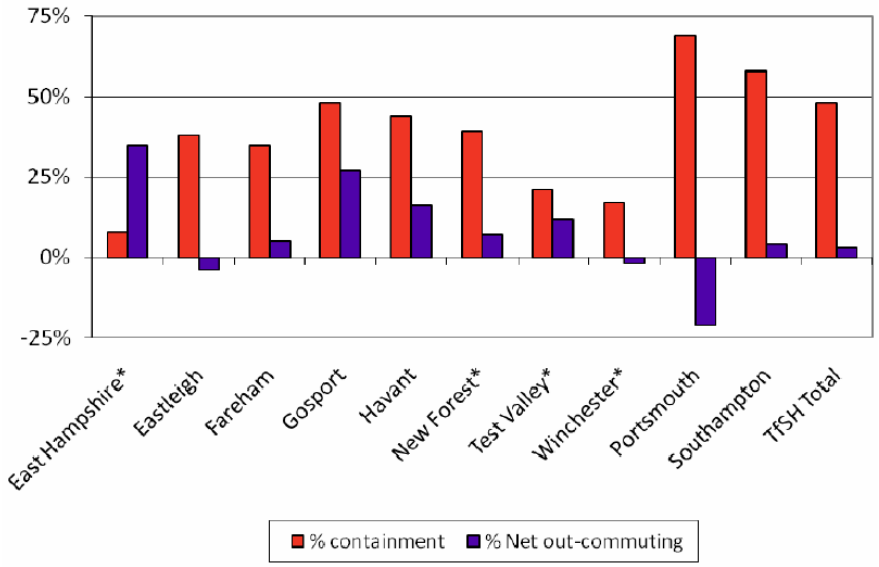


Figure 2.24: Level of Containment and Out-Commuting by District

Unsurprisingly, the cities have the highest levels of containment, a situation that the PUSH 'Cities First' principle will seek to continue and exploit. At the other extreme, segments of East Hampshire, Test Valley and Winchester in the TfSH area are the least contained, being the most outlying areas with lower densities of employment.

Only Portsmouth, Eastleigh and the parts of Winchester in the TfSH area are net importers of labour. Southampton's status as a net exporter of labour may initially be surprising, but relates to it having a fairly large district area including a number of large residential areas. The city center area itself is a net importer.

While Gosport's level of containment is the highest (outside of the two cities), it is one of the largest net exporters of labour in percentage terms, reflecting the decline in employment opportunities in this area. This high level of movement away from the peninsula places significant pressure on the road network. New employment development such as at the Enterprise Zone are intended to reverse this trend, increase containment and hence reduce pressure on the road network.

There is a close relationship between containment levels and mode of travel, because as journeys become longer, car is more likely to be used. *Figure 2.13*, above, shows the annual trip rates in the AM peak by district. The districts previously identified as having low levels of containment (East Hampshire, Test Valley and Winchester) also have the highest proportion of trips made by car whereas they are lowest in the cities where the denser population and more extensive public transport networks and comparative speed and cost with the private car mean that public transport and active modes are more likely to be viable options.

It is also notable that the urban areas of Havant, Eastleigh and Fareham have high overall trip rates, and generate a similar number of car trips per person to the areas with low containment. Gosport however has the lowest car trip rate which is due to the limited accessibility on the Gosport peninsula and relatively low incomes.

A more detailed analysis of interactions between areas is provided in figure 2.25, which shows an analysis of AM commuting patterns across all modes between and within districts (Rows = origins and Columns = destinations). The largest commuter flows in the table are highlighted in yellow (1000-2499 trips per day) and orange (over 2500 trips per day). 'Rest' indicates trips to and from outside the core TfSH area, including commuting to and from London.

All Modes		East Hampshire	Eastleigh	Fareham	Gosport	Havant	New Forest	Test Valley	Winchester	Portsmouth	Southampton	Rest	Internal	Out-commute	Total
East Hampshire	1	2123	207	371	68	1196	57	52	337	1110	166	755	2123	4321	6443
Eastleigh	2	129	9351	1104	127	632	1025	1231	2784	833	5414	1875	9351	15155	24506
Fareham	3	223	1517	7761	2859	1288	382	322	2264	3286	846	1258	7761	14246	22007
Gosport	4	82	234	4376	7524	306	88	69	660	1712	106	604	7524	8237	15761
Havant	5	1537	687	1362	175	11218	198	175	871	6039	463	2854	11218	14363	25580
New Forest	6	43	1257	449	71	272	10509	694	1505	436	2993	2421	10509	10142	20651
Test Valley	7	23	1680	231	35	135	905	3031	819	239	2184	1323	3031	7573	10604
Winchester	8	170	1491	1247	259	1053	661	412	7507	1416	1796	2161	7507	10665	18172
Portsmouth	9	769	550	2015	740	3694	196	160	1166	28224	375	2315	28224	11980	38203
Southampton	10	101	7491	949	52	313	3051	1471	2359	686	28138	2642	28138	19114	45253
Rest	11	416	1171	754	329	1499	2072	879	2162	2556	3184	52533	52533	15021	67554
Internal		2123	9351	7761	7524	11218	10509	3031	7507	28224	28138	52533			163918
Out-commute		3493	16285	12858	4716	10388	8634	5464	14927	18312	17527	18210			130815
Total		5616	25636	20619	12239	21606	19143	8495	22434	44536	43665	70743	163918	130815	294733

Figure 2.25: Analysis of AM Commuting Patterns Across all Modes between and within Districts - all Modes (Rows = Origins and Columns = Destinations)

Apart from the AM trips contained within a district, the key corridors are as follows:

1. Eastleigh to Southampton (both ways)
2. Havant to Portsmouth (both ways)
3. Gosport to Fareham (both ways)
4. Fareham to Portsmouth (one way)
5. External of TfSH to Southampton (both ways)
6. New Forest to Southampton (both ways)
7. Havant to External of TfSH (one way)
8. Eastleigh to Winchester (Core) (one way)
9. External of TfSH to Portsmouth (one way)

Carbon

236.5 Tonnes of carbon are emitted from the transport sector each day in the AM peak in South Hampshire. How this is split by authority area is shown in *figure 2.26.* This shows that the two cities, Eastleigh and Fareham are responsible for the highest levels of carbon output.

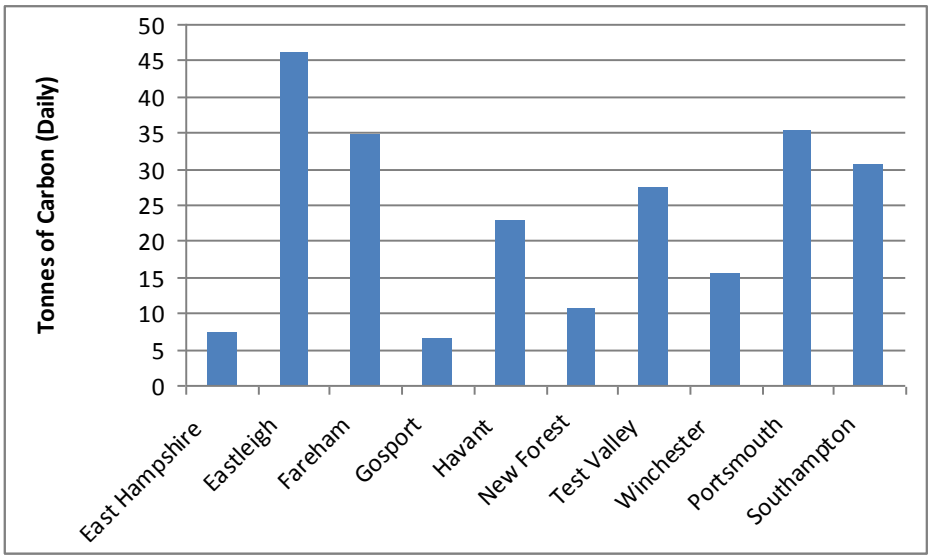


Figure 2.26: Tonnes of Carbon from Transport Sources by District (AM Peak)

2.4.2 Future Transport Situation

Our modelling capability, as described in the Economic Case, enables us to forecast the change in demand across modes. We have established four future forecast year reference cases (2014, 2019, 2026, and 2036), which provide us with the ability to identify future transport barriers to sustainable economic growth. Importantly, the future reference cases assume no improvements to the transport system other than those already committed (e.g. BRT Phase 1 in Gosport).

Figure 2.27 shows the forecast change in total trips to/ from or within the TfSH area across all modes between 2010 and 2016. This shows that total trips increase across all modes and within each mode. The growth in trips by car between 2010 and 2026 is 13%, whilst the growth for public transport is 3% and for active modes it is 5%. Total trips increase by 11%. The relative proportion of trips by each mode to total trips remains largely unchanged.

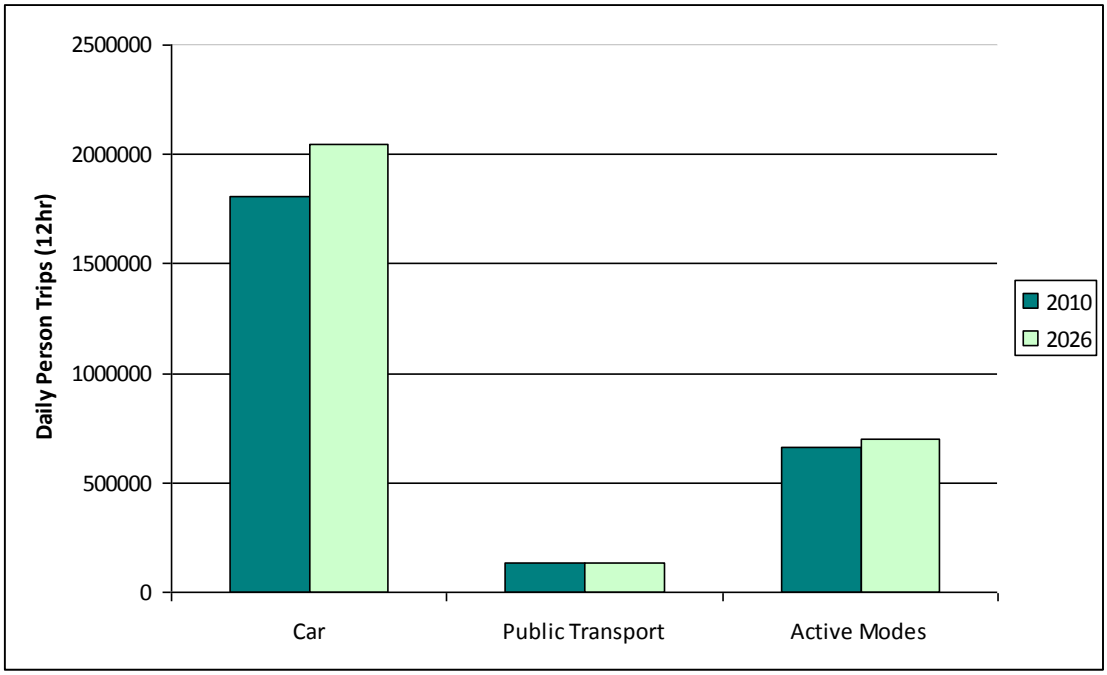


Figure 2.27: Change in Total Trips to/from or within the TfSH by Mode (2010 – 2026)

Mechanised Modes

Total vehicles (expressed as Per Car Units - PCUs) on the highway network within the TfSH area are forecast to grow 15% between 2010 and 2026. The growth by reference case year up to 2026 in the AM peak is shown in *figure 2.28*. Total vehicle kilometres are forecast to grow by 17% between 2010 and 2026.

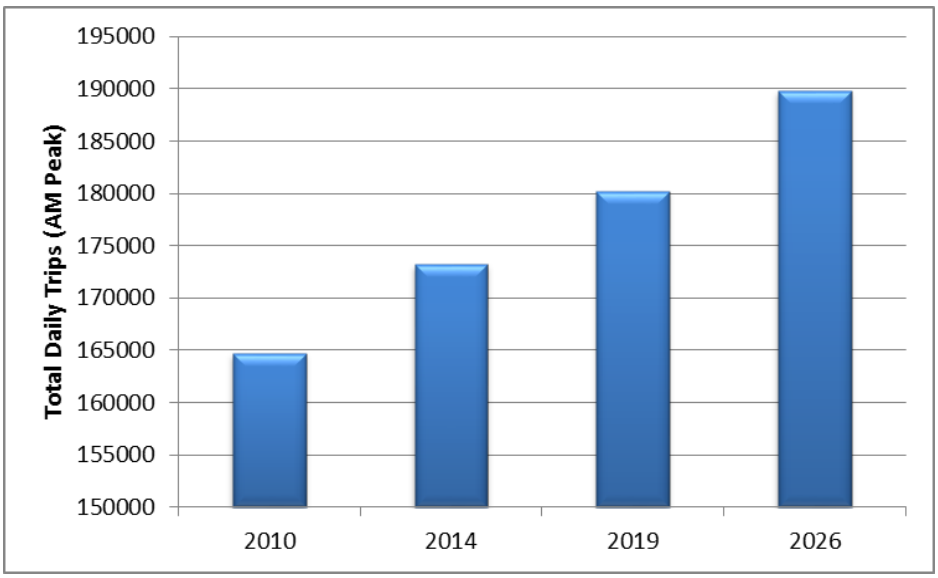
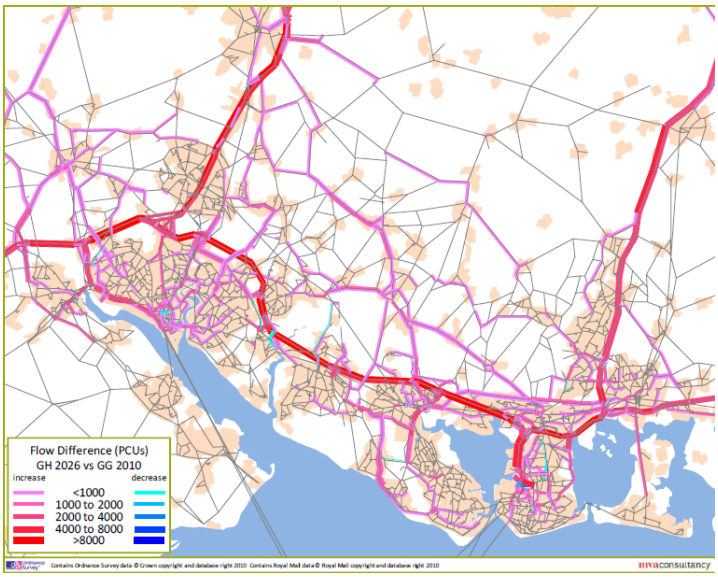


Figure 2.28: Growth in Total Daily PCU Trips in the AM Peak

Map 2.10 shows the forecast change in highway flows in the AM peak between 2010 and 2026 in South Hampshire. Red denotes increased flows and blue denotes a decrease. Increased demand for the highway network dominates, and is particularly concentrated on the M27, M3 and A3(M), but also on radial routes into Southampton, Gosport and Portsmouth.



Map 2.10: Forecast Change in Highway Flows in the AM Peak (2010-26) in South Hampshire

The volume of vehicular traffic on our roads is forecast to cause worsening journey times and delays. *Figure 2.29* shows the total number of vehicle hours spent on our highway network in each period each day, split between Link Cruise Time (free flow conditions), Transient Queues (Time spent waiting for the next green light), and Over Capacity Queues (Where delay lasts more than one traffic signal cycle). This has negative implications for productivity and carbon.

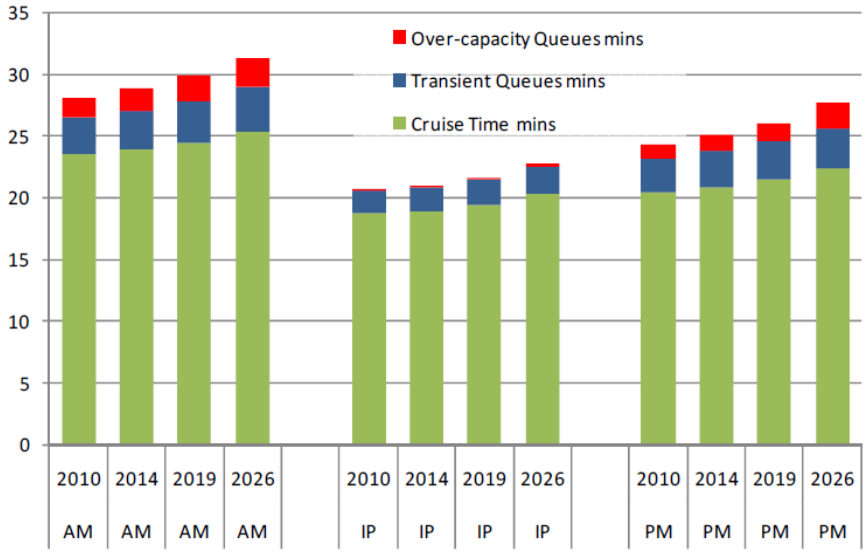


Figure 2.29: Total Number of Daily Vehicle Hours Spent on TfSH Highway Network by Period

Vehicle time spent in queues is forecast to increase by 53% over the busiest 12 hour period in the TfSH area between 2010 and 2026. This is broken down by queue type and period in *figure 2.30*. This shows that time spent in over-capacity queues increases by 78% in the AM peak, more than doubles in the PM peak (112%) and almost trebles in the inter-peak (189%).

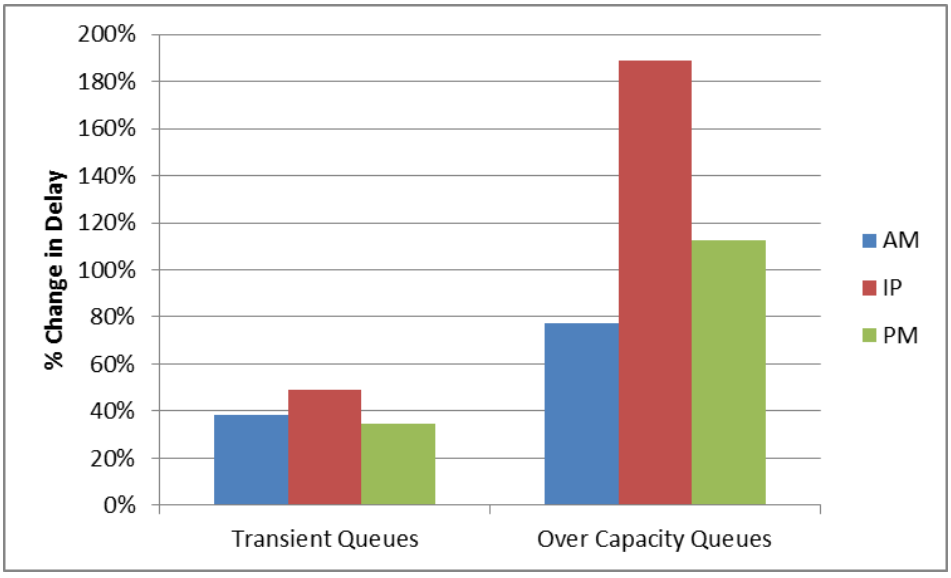
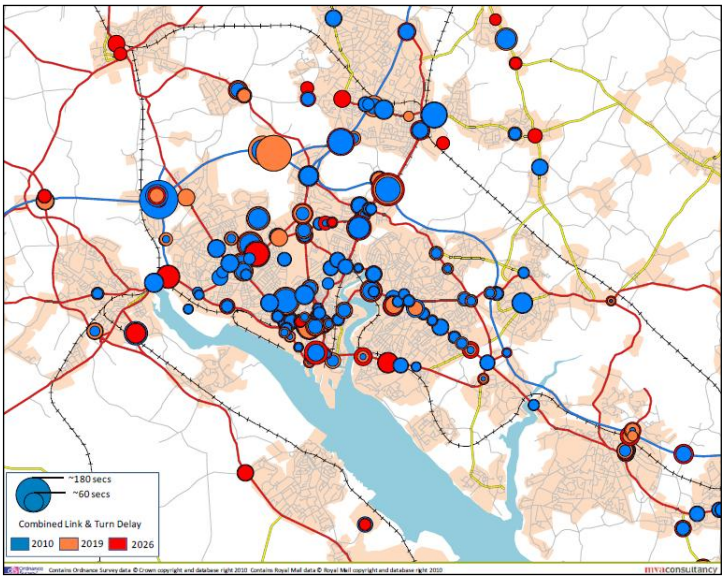
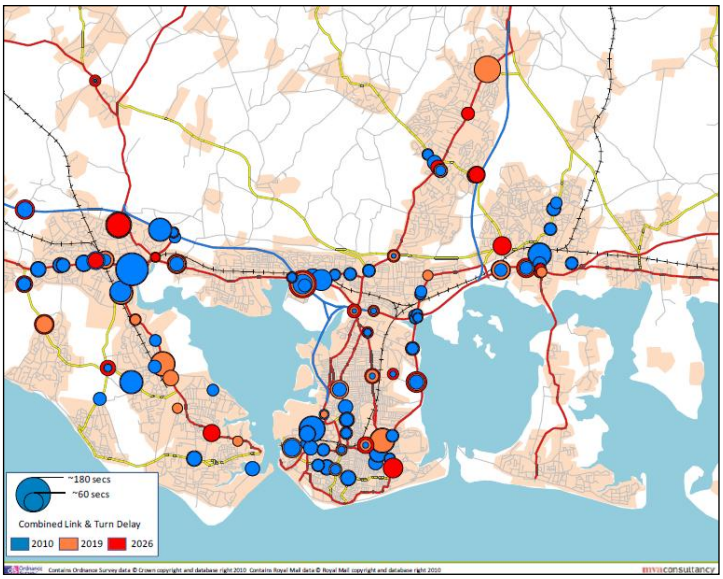


Figure 2.30: Increase in Vehicle Delays (2010-26)

These increases in delays as a result of increased demand for a finite highway capacity are forecast to result in reductions to highway journey times (for all mechanised modes). Delays are forecast to be greatest on the M3 and M27 and also on the radial routes into our cities, across all time periods. The average junction delay (i.e. the delay in time to each PCU) in the AM peak is shown for the western part of the TfSH area (*Map 2.11*) and for the eastern part of the area (*Map 2.12*) for 2010, 2019, and 2026. These show existing delays are forecast to increase with additional junctions also coming under stress.



Map 2.11: Average AM Peak Delay for Each PCU in 2010, 2019 and 2026 (West)



Map 2.12: Average AM Peak Delay for Each PCU in 2010, 2019 and 2026 (East)

Public Transport

Overall demand for public transport is forecast to increase by just 3% across the 12 hour period (07:00–19:00) between 2010 and 2026. This is extremely low as a consequence of increased competition for limited highway capacity and the associated increasing delays impacting on the relative attractiveness of public transport. *Figure 2.31* shows daily passengers (12 hour) by period between 2010 and 2026. The number of passengers increases in each period (AM 3%, IP 6% and PM 1%). This low level of growth is highly undesirable.

Figure 2.31: Daily Passengers (12 hour period) by Period (2010-26)

Figure 2.32 shows daily AM peak boardings by public transport mode for 2010-26. This shows an increase in rail (9%) and in ferry (1%) boardings, but a 1% fall in bus use. Again, this is a hugely undesirable situation and is a consequence of reduced bus speeds as overall demand for highway capacity increases.

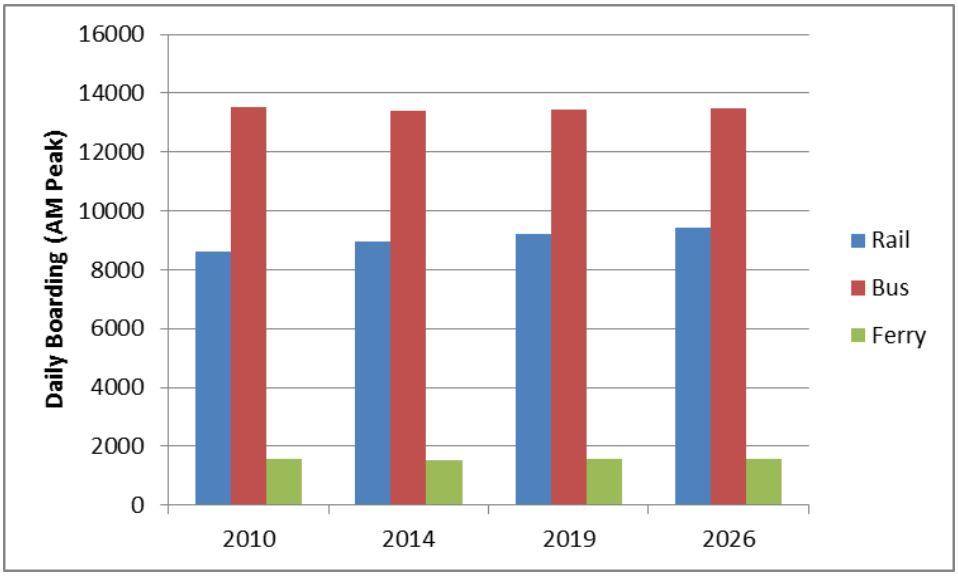


Figure 2.32: Daily AM Boardings by Public Transport Mode (2010-26)

Figures 2.33 and *2.34* show sections of the public transport network where bus speeds are less than 10kph in the western and eastern parts of the TfSH area, respectively in 2019. When compared with *figures 2.18* and *2.19*, the incidences of bus delays on the network can be seen to increase, particularly on the radial routes into our cities.

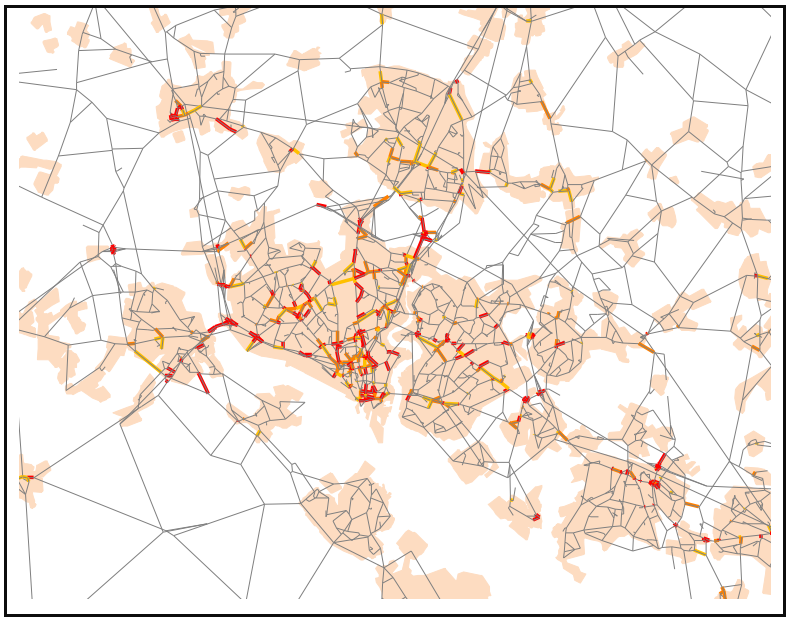


Figure 2.33: Sections of the Western Public Transport Network Where Bus Speeds are Less Than 10kph (2019)

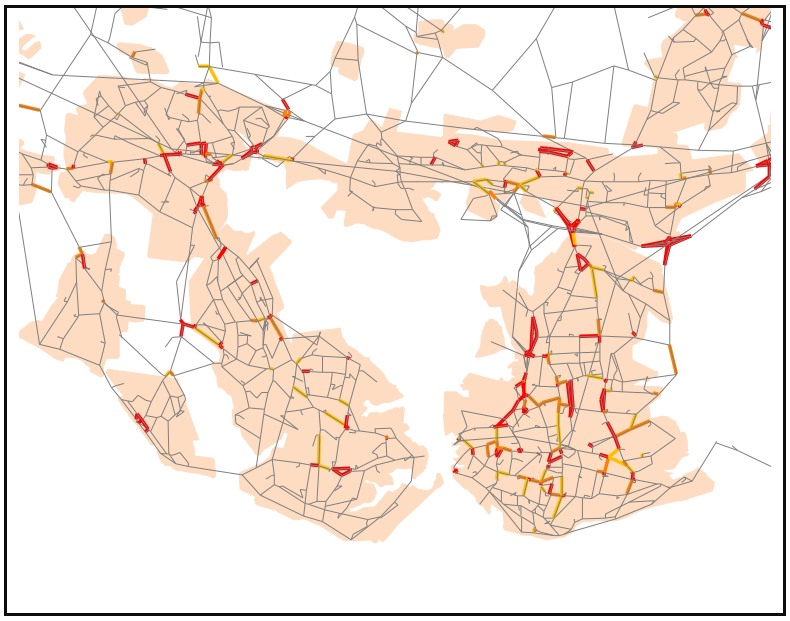


Figure 2.34: Sections of the Eastern Public Transport Network Where Bus Speeds are Less Than 10kph (2019)

These increased incidences of low bus speeds have the effect of making bus use less attractive as a mode; as a consequence flows are forecast to reduce. The changes in public transport flows across the TfSH area between 2010 and 2026 within the AM peak are shown *in figure 2.35*. The width of the band denotes the extent of the change on flow, with increased flows shown by blues and reductions shown by reds.

Figure 2.35 shows that the largest increases in public transport flows are expected on rail, whilst flows on the radial bus routes into our cities and towns are forecast to reduce. It can also be seen that the segregated bus way (Bus Rapid Transit) in Gosport is responsible for a significant growth in bus demand on the Gosport peninsular, although this, in part, can be explained by abstraction from other services.

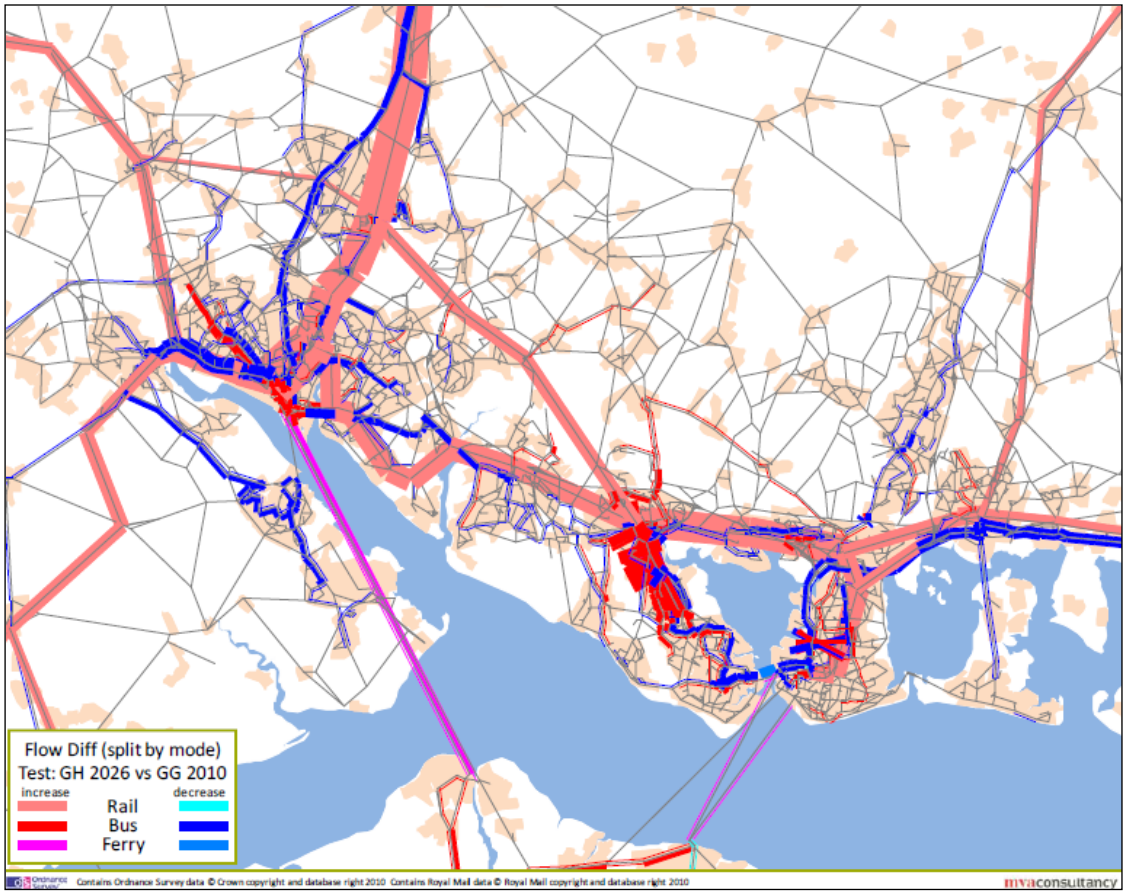


Figure 2.35: Public Transport Flows Across the TfSH Area between 2010-26 in the AM Peak

Active Modes

The total number of trips to/ from or within the TfSH area undertaken by active modes is forecast to increase by 5% between 2010 and 2026. The change in trips by active modes is broken down by authority area in *figure 2.36*. This shows decreases in the largely peripheral districts of New Forest and East Hampshire, but also decreases in Gosport and Havant. Growth is reasonable in the two cities, whilst the large growth in Winchester can be accounted for by a move from a low base as a result of significant planned new housing developments increasing the population of the part of Winchester District within the TfSH area (at Waterlooville and Whiteley).

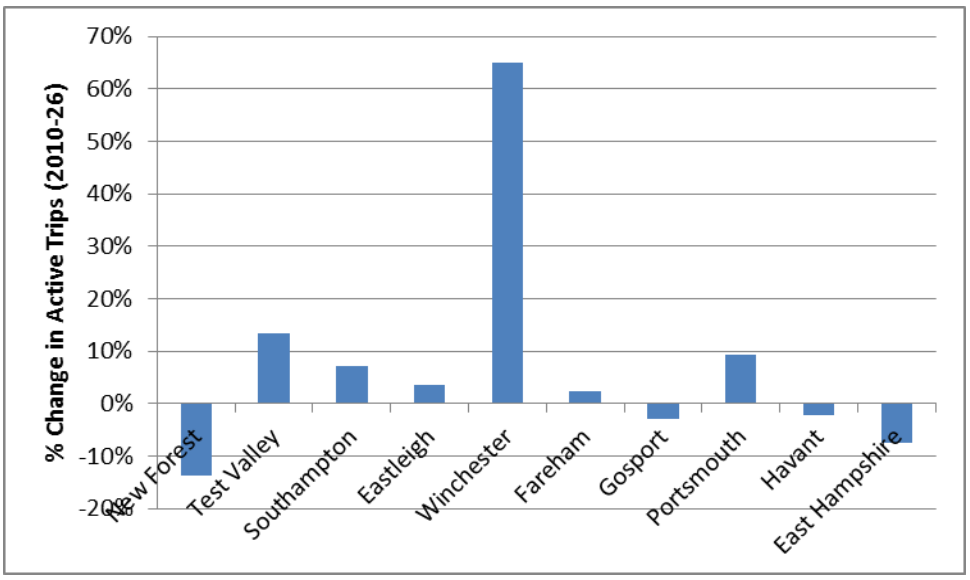


Figure 2.36: Change in Active Trips by Authority (2010-26)

Carbon

Figure 2.37 shows the forecast trend in a range of vehicle emission for the TfSH area. Despite the forecast increase in traffic distance (blue line) and traffic hours (red line), the trajectory for all emission is initially downwards as vehicle technology is forecast to improve and reduce emission per vehicle km. However, the technological impact is only apparent until the early to mid-2020s, after which the increase in traffic volumes continues unmitigated and emissions begin to rise again. In particular, carbon and carbon monoxide levels have returned to around 2010 levels by 2026. In terms of local pollutants, Nitrous Oxide (NOx) levels are cut substantially, but particulate (PM10) and hydrocarbons (HC) are less effectively mitigated.

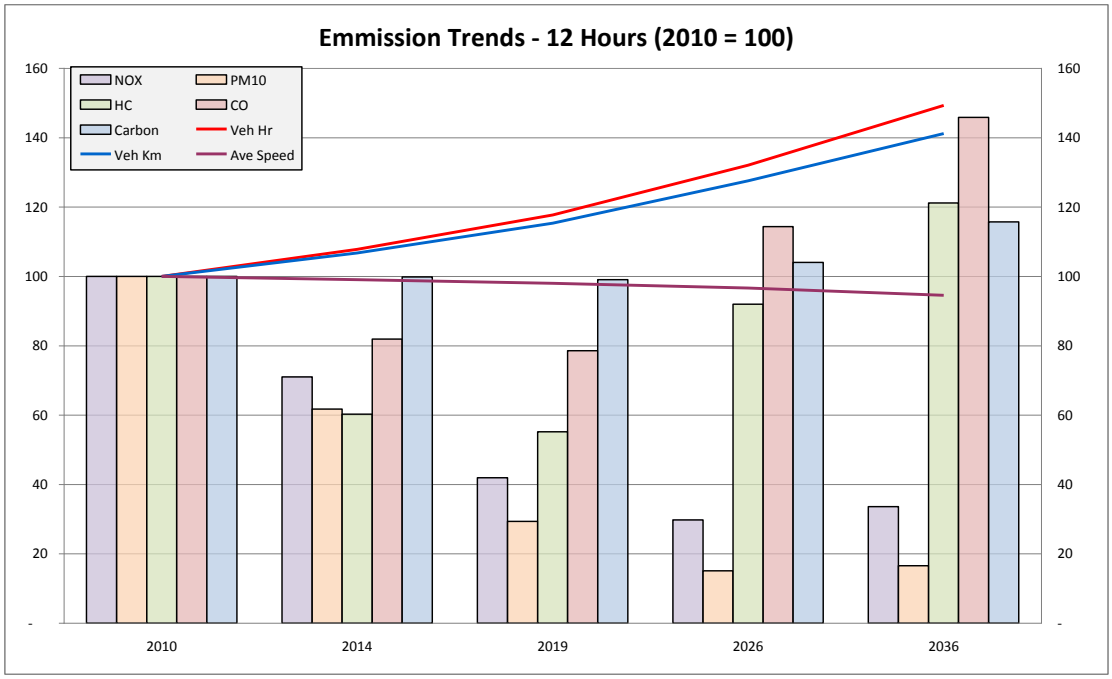


Figure 2.37: Forecast trend in a range of vehicle emission for the TfSH area (2010-26)

Figure 2.38 shows that carbon output, whilst initially falling from a 2010 base of 194,278,232kg per annum, rises from 2019, rapidly surpassing 2010 levels. This is hugely undesirable.

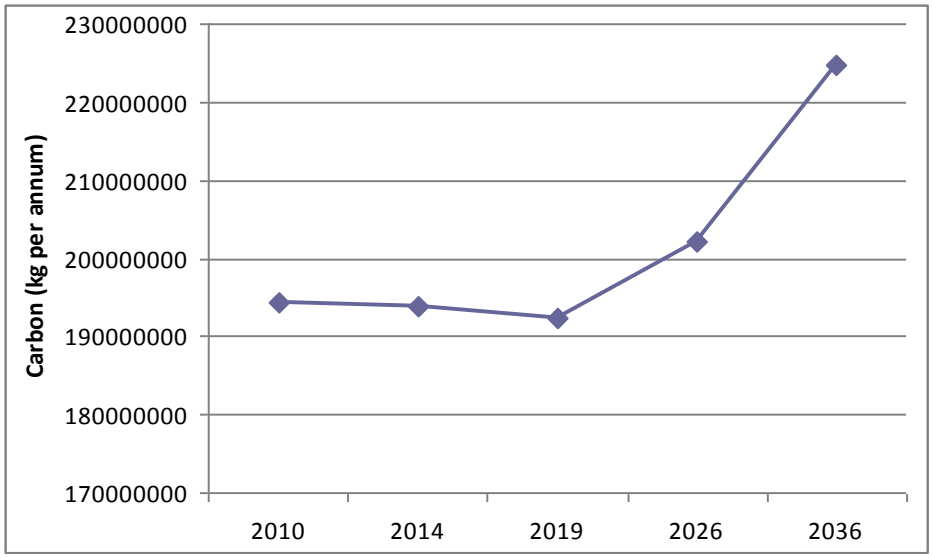


Figure 2.38: Carbon Output (kg per annum) from Transport Sources by District (AM Peak)

2.4.3 Summary of Current and Future Transport Problems

The majority of all trips in the TfSH area are currently made by car. Within the peaks, in particular, the daily commute is dominated by car trips. Around 10% of peak period travel time today is spent in queues caused by demand in excess of junction capacities. With total car trips within the TfSH area set to grow by around 13% by 2026, the total time lost in such delays will increase by more than 50% compared to levels today.

Most delay currently occurs in the urban areas on radial routes into the city centres, as well as the city centres themselves. The largest hotspots in terms of total delay are the motorway junctions, which has implications for strategic movements, and impacts negatively on the economic competitiveness of our international gateways and our economic centres. These problems are forecast to be exacerbated in the future.

Many of the vehicles contributing to delays are making relatively short trips. Indeed, in the most densely populated areas more than 68% of trips are less than 5km in length. The motorway network, too, is supporting a substantial proportion of short trips, with around 28% of trips on the M27 involving 'hops' of one or two junctions, emphasising the role of this route as a local distributor road.

The increased demand for highway capacity is forecast to have a negative impact on bus patronage growth. Increases in incidence of delays to buses are forecast which will act to reduce the attractiveness of the mode.

The impact of the transport constraints identified in this section on population and employment growth in South Hampshire have been modelled and are shown in *figures 2.39* and *2.40*. In both instances the base case is shown by a green line, whilst the impact of transport constraints is shown by a blue line. This shows that from 2014, transport constraints reduce growth of both population and employment. This will impact on the contribution that South Hampshire can make to the UK economy and have implications for the competitiveness of our businesses and the quality of life of our residents.

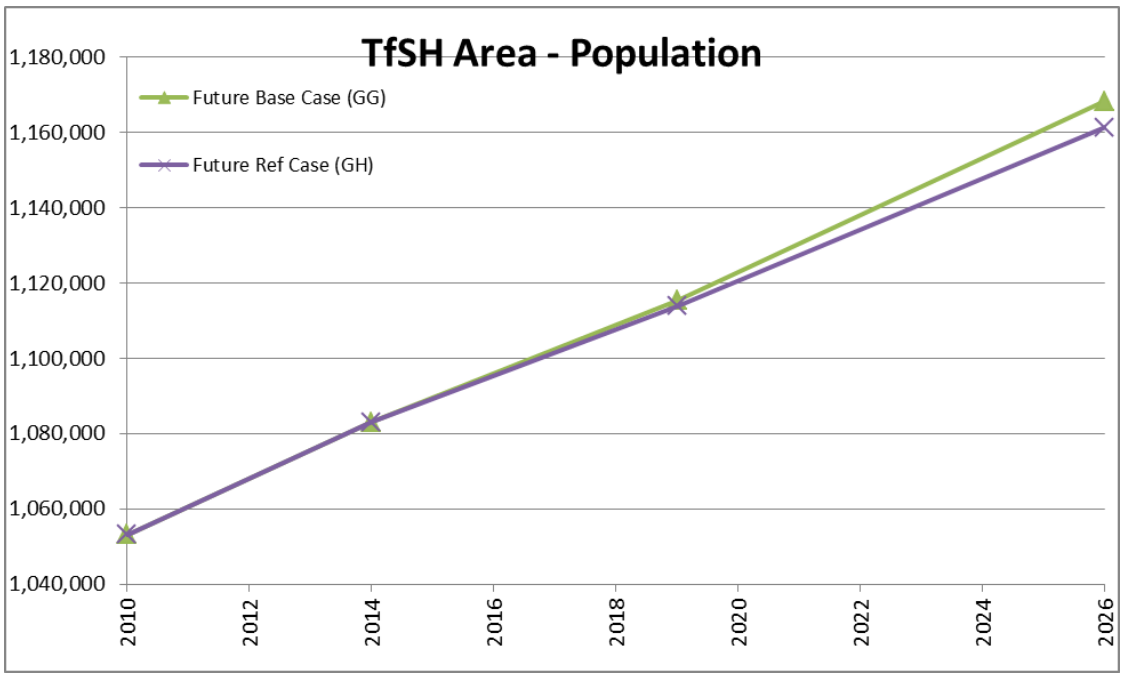


Figure 2.39: Impact of Transport Constraints on Population

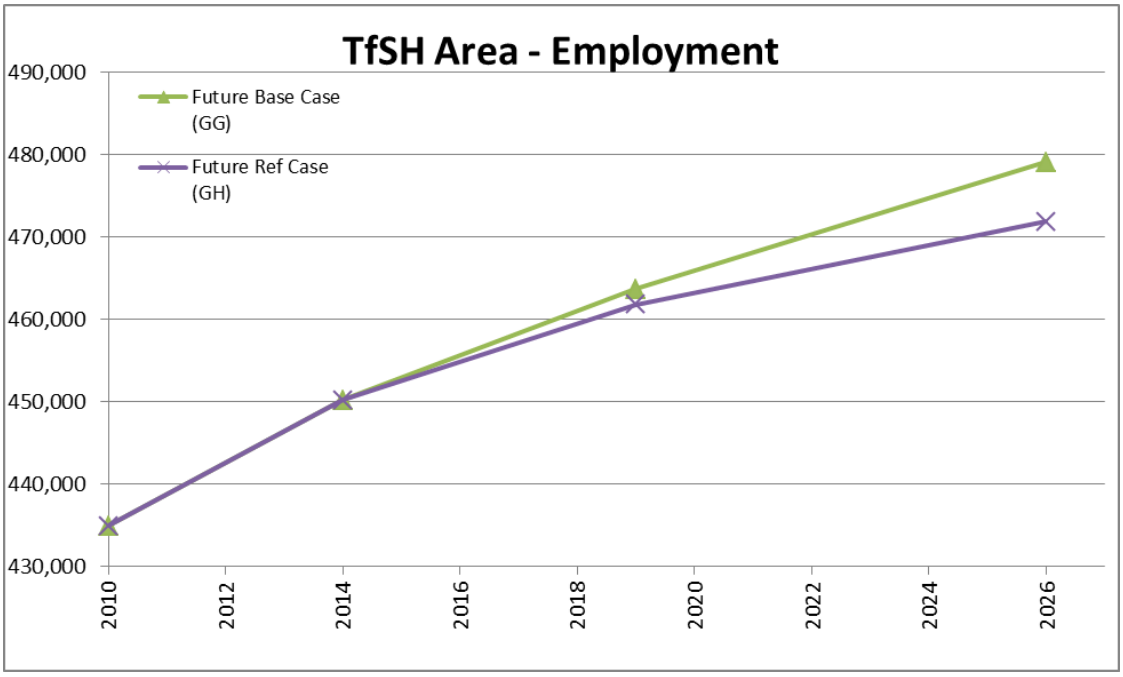


Figure 2.40: Impact of Transport Constraints on Employment Growth

As identified in section 2.2, which considered the economic context, there is a need for transport intervention in South Hampshire to support sustainable economic growth. In the absence of transport intervention, transport will demonstrably act as a constraint on sustainable economic growth.

The areas that stand out as having particularly acute transport problems across a range of measures are Southampton, Portsmouth and Gosport. These locations were also identified within section 2.2 as suffering with significant pockets of deprivation, economic inactivity and health problems. Furthermore, these areas have been identified as locations within which those sectors for which South Hampshire has a competitive advantage are located and have the potential to drive forward economic and employment growth.

An analysis of commuting movements has identified that Portsmouth is a net importer of labour, Gosport a net exporter, whilst Southampton sees significant two-way flows, with its city centre seeing significant imports of labour. It has been possible to identify the key commuting corridors:

1. Eastleigh to Southampton (both ways)
2. Havant to Portsmouth (both ways)
3. Gosport to Fareham (both ways)
4. Fareham to Portsmouth (one way)
5. External of TfSH to Southampton (both ways)
6. New Forest to Southampton (both ways)
7. Havant to External of TfSH (one way)
8. Eastleigh to Winchester (Core) (one way)
9. External of TfSH to Portsmouth (one way)

There is, therefore, a strong case for transport intervention targeted at:

- Improving the quality of alternative modes to the private car along key corridors – particularly between the two cities and their hinterlands and also to and from Gosport
- Encouraging mode shift from the car, targeting those short-distance trips that could be undertaken by public transport or active modes to reduce carbon, and thereby releasing highway capacity for strategic movements – particularly to our international gateways and economic centres.

When developing options it is important to target evidenced problems, but to also take advantage of opportunities. Indeed, there are encouraging opportunities that can be taken advantage of, including:

- High levels of containment in the two cities and in Gosport
- High levels of overall active modes trips
- Existing public transport and active travel commuting flows to/ from and with the two cities and Gosport
- Planned employment growth close to centres of population (e.g. city centres and Gosport).

2.5 Transport Barriers in South Hampshire

Transport Barriers

As described in section 2.3, our LSTF proposals are a key early phase subset of the wider deliver programme we are developing through our Long Term Strategic Implementation Plan (LTSIP). Our LSTF proposals need therefore to provide solutions to the problems (or barriers) that have been identified within the emerging LTSIP as inhibiting sustainable economic growth in South Hampshire.

Section 2.4 considered the current and future transport situation in the light of the local economic, environmental and social context (as described in section 2.2). This review has provided the background to the key transport barriers that exist within South Hampshire. These barriers are presented in *table 2.8* and, in accordance with webTAG Unit 2.1 (December 2004 draft), they emerge from:

- Current transport-related problems
- Future transport-related problems
- Underlying causes.

By their nature, these barriers are spatially specific and often quite detailed. As discussed in section 2.2, the local objectives of the Solent LEP and PUSH, which give the non-transport direction, are also spatially-specific, and help to set out the 'big picture' into which the various transport barriers fit.

B1 - low containment in new developments outside existing urban areas, leading to longer and less sustainable commuting distances
B2 – limited employment opportunities in Gosport leading to out-commuting
B3 – high levels of car dependence for journeys outside of cities and Gosport
B4 – South Hampshire operating as two separate journey to work areas
B5 – areas of deprivation have poorer than average access to jobs by public transport
B6 – out of town areas have more limited employment catchments and can be significantly less accessible by public transport
B7 - forecast growth at ports will increase pressure on transport network and may not be realised if capacity not available
B8 – mode shift projections for freight traffic may not be realised if insufficient incentive available to switch
B9 - absence of direct rail links to the airport from the east discourages use of public transport
B10 – risk of flooding is a constraint on types of interventions that can be incorporated into LTSIP
B11 – M27 forecast to be operating above capacity, particularly in vicinity of North Fareham SDA
B12 – urban motorways form physical barriers to movement by active modes from a number of locations
B13 – current and increasing levels of delay on M27 in vicinity of Southampton
B14 – delays along key corridors in Southampton may stifle growth of economy
B15 – delays caused by congestion on M27 adversely affect east to west movements
B16 – high out-commuting from Gosport contributes to significant delay along A32 and in Fareham
B17 – congestion on links to Portsea Island and around Portsmouth city centre will potentially constrain access to the port and new developments
B18 - increase delay at M3 junctions in Winchester area adversely affecting freight movements
B19 – inefficient use of South Hampshire road network for trips that could be made by active modes or public transport
B20 – capacity constraints on rail to London mean there is limited capacity for further growth
B21 – number of rail infrastructure limitations currently prevent operation of rail services from Southampton Airport Parkway to the east TfSH area
B22 – slow and infrequent train services between Portsmouth and Southampton contribute to the low levels of interaction
B23 – commercial nature of bus services means that it is uncertain whether or not optimum use of this investment will be made for the TfSH area
B24 – optimal benefit from BRT investment will not be realised if it is not developed as part of a high quality, integrated transport offer
B25 – bus journey times are forecast to increase as a result of congestion
B26 – increasing transport costs caused by demand exceeding available capacity is forecast to limit uptake of permissible sites for development
B27 – forecast increases in traffic volumes will mean that carbon emissions from TfSH area increase in real terms
B28 - High levels of inactivity and obesity in some areas of South Hampshire contribute to a poorer quality of life and have a detrimental effect on the South Hampshire economy.

Table 2.8: Transport Barriers in South Hampshire

2.6 Development of Local Objectives

Objectives play a crucial role in the appraisal process. They ultimately make sure that the preferred interventions identified in the appraisal process make a positive contribution to solving the problems and issues identified within the transport system (under a do-minimum scenario).

Since the submission of the *Initial Proposal*, our wider work on developing a Long Term Strategic Implementation Plan (LTSIP) has progressed (as described in section 2.3). This process has identified the key transport barriers (see table 2.8) that are inhibiting, and are forecast to continue to inhibit, progression toward the sub-national outcomes (section 2.3). This improved understanding and evidence has identified a strong case for transport intervention targeted at:

- Improving the quality of alternative modes to the private car along key corridors – particularly between the two cities and their hinterlands and also to and from Gosport
- Encouraging mode shift from the car, targeting those short-distance trips that could be undertaken by public transport or active modes to reduce carbon, improve health and release highway capacity for strategic movements – particularly to our international gateways and economic centres

The five local objectives outlined in the *Initial Proposal* have been reviewed against the identified barriers and subsequently refined to provide the objectives for both the LTSIP and our LSTF proposals. This section describes the process followed for revising the objectives.

The objectives contained within the *Initial Proposal* were reviewed against the barriers and against the two delivery programmes being developed, LSTF and LTSIP. This analysis is shown in *table 2.9*.

Table 2.9 shows that each of the *Initial Proposal* objectives addresses at least one barrier. However, it also reveals that several barriers do not fit directly with the objectives and as such additional objectives and/ or an amendment to the existing objectives is required. This revision took place at a TfSH Evidence Base Progress Meeting on the 4th October. The suggested amendments were subsequently commented on and accepted by the LSTF Business Case Project Team.

Initial Proposal **Objectives**	**Local Transport Barriers**
1 Enabling the growth of our international gateways through reduced congestion by shifting car trips to alternative modes	B7 - forecast growth at ports will increase pressure on transport network and may not be realised if capacity not available B9 - absence of direct rail links to the airport from the east discourages use of public transport B13 – current and increasing levels of delay on M27 in vicinity of Southampton B17 – congestion on links to Portsea Island and around Portsmouth city centre will potentially constrain access to the port and new developments B18 - increase delay at M3 junctions in Winchester area adversely affecting freight movements
2 Improving sustainable access to the jobs and facilities in our cities and towns by enhancing the public transport experience and access by walking and cycling	B11 – M27 forecast to be operating above capacity, particularly in vicinity of North Fareham SDA B19 – inefficient use of South Hampshire road network for trips that could be made by active modes or public transport B22 – slow and infrequent train services between Portsmouth and Southampton contribute to the low levels of interaction B24 – optimal benefit from BRT investment will not be realised if it is not developed as part of a high quality, integrated transport offer B25 – bus journey times are forecast to increase as a result of congestion
3 Reducing emissions (including carbon) from the transport Sector	B3 – high levels of car dependence for journeys outside of cities and Gosport B8 – mode shift projections for freight traffic may not be realised if insufficient incentive available to switch B27 – forecast increases in traffic volumes will mean that carbon emissions from TfSH area increase in real terms
4 Reducing unemployment and deprivation where levels are highest through improved access	B5 – areas of deprivation have poorer than average access to jobs by public transport
5 Improving levels of physical activity and reducing obesity through active travel	B12 – urban motorways form physical barriers to movement by active modes from a number of locations B28 - High levels of inactivity and obesity in some areas of South Hampshire contribute to a poorer quality of life and have a detrimental effect on the South Hampshire economy.

Table 2.9: Mapping Initial Proposal Objectives Against Local Transport Barriers

Improved economic growth has long been the principal objective for TfSH and, along with carbon reduction, is a key criterion within DfT advice and within the LSTF guidance. With regard to economic growth, the key task, from the evidence gathered, will be to improve business performance and productivity, through managing congestion, improving access and creating more efficient labour markets. While the first objective refers to the labour markets there is little on business performance other than the reference to the international gateways. While enabling the continued growth of the international gateways will remain important, it is only a subset of the overall business performance of the area.

To reflect this, the first objective was amended to two objectives:

- Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity
- Enhance business performance, particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion

It was felt that the second objective could be sharpened to:

- Improve sustainable access linking people to jobs and key facilities in our cities and towns

The third objective was made more specific, to focus on reducing the level of vehicular kilometres:

- Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres

The fourth objective was amended slightly to focus on access to employment centres, in particular:

- Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres

The fifth objective was broadened to wider health improvements as opposed to just obesity:

- Improve levels of physical activity, health and wellbeing through increased active travel

The development of the original five objectives to the six objectives for this Business Case is shown in *table 2.10*. Our LSTF local objectives match those of the LTSIP.

Objectives within the *Initial Proposal*	**LTSIP and LSTF Local Objectives**
• Enabling the growth of our international gateways through reduced congestion by shifting car trips to alternative modes	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity
	• Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion
• Improving sustainable access to the jobs and facilities in our cities and towns by enhancing the public transport experience and access by walking and cycling	• Improve sustainable access linking people to jobs and key facilities in our cities and towns
• Reducing emissions (including carbon) from the transport Sector	• Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres
• Reducing unemployment and deprivation where levels are highest through improved access	• Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres
• Improving levels of physical activity and reducing obesity through active travel	• Improve levels of physical activity, health and wellbeing through increased active travel

Table 2.10: Development of Local Objectives from Initial Proposal Objectives

Table 2.11 maps the revised objectives against the barriers.

Revised Local Objectives	**Barriers Addressed**
Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity	B4 – South Hampshire operating as two separate journey to work areas B6 – out of town areas have more limited employment catchments and can be significant less accessible by public transport B13 – current and increasing levels of delay on M27 in vicinity of Southampton B14 – delays along key corridors in Southampton may stifle growth of economy B15 – delays caused by congestion on M27 adversely affect east to west movements B20 – capacity constraints on rail to London mean there is limited capacity for further growth B21 – number of rail infrastructure limitations currently prevent operation of rail services from Southampton Airport Parkway to the east TfSH area B22 – slow and infrequent train services between Portsmouth and Southampton contribute to the low levels of interaction B26 – increasing transport costs caused by demand exceeding available capacity is forecast to limit uptake of permissible sites for development
Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion	B7 - forecast growth at ports will increase pressure on transport network and may not be realised if capacity not available B9 - absence of direct rail links to the airport from the east discourages use of public transport B13 – current and increasing levels of delay on M27 in vicinity of Southampton B17 – congestion on links to Portsea Island and around Portsmouth city centre will potentially constrain access to the port and new developments B18 - increase delay at M3 junctions in Winchester area adversely affecting freight movements

Improve sustainable access linking people to jobs and key facilities in our cities and towns	B1 - low containment in new developments outside existing urban areas, leading to longer and less sustainable commuting distances B2 – limited employment opportunities in Gosport leading to out-commuting B11 – M27 forecast to be operating above capacity, particularly in vicinity of North Fareham SDA B16 – high out-commuting from Gosport contributes to significant delay along A32 and in Fareham B19 – inefficient use of South Hampshire road network for trips that could be made by active modes or public transport B24 – optimal benefit from BRT investment will not be realised if it is not developed as part of a high quality, integrated transport offer B25 – bus journey times are forecast to increase as a result of congestion
Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres	B3 – high levels of car dependence for journeys outside of cities and Gosport B8 – mode shift projections for freight traffic may not be realised if insufficient incentive available to switch B27 – forecast increases in traffic volumes will mean that carbon emissions from TfSH area increase in real terms
Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres	B5 – areas of deprivation have poorer than average access to jobs by public transport
Improve levels of physical activity, health and wellbeing through increased active travel	B12 – urban motorways form physical barriers to movement by active modes from a number of locations B28 - High levels of inactivity and obesity in some areas of South Hampshire contribute to a poorer quality of life and have a detrimental effect on the South Hampshire economy.

Table 2.11: Mapping Revised Local Objectives against Local Transport Barriers

This leaves just two barriers that are not directly addressed by the revised local objectives:

- B10 – risk of flooding is a constraint on types of interventions that can be incorporated into LTSIP
- B23 – commercial nature of bus services means that it is uncertain whether or not optimum use of this investment will be made for TfSH area.

These are beyond the reach of local transport intervention and will require mitigation through engagement with the relevant responsible bodies.

2.7 The Range of Solutions considered to meet the Project Objectives

The underpinning strategy of the proposals contained within this Business Case has been re-focussed since the submission of the *Initial Proposal* as a consequence of an improved evidence base and changes to the local economic landscape. These changes are necessary to ensure that our proposals better deliver against the dual LSTF drivers of economic growth and carbon reduction, within the South Hampshire context. This section describes the development of the TfSH proposals from the *Initial Proposal* formulation to this Business Case.

2.7.1 The *Initial Proposal*

Guiding Principles for Option Generation within the *Initial Proposal*

Section 2.3 lists the five sub-national outcomes that emerged from the *Urban South Hampshire 2014-19 Delivery Strategy* and their subsequent refresh through our workstream on developing a Long Term Strategic Implementation Plan (LTSIP) for South Hampshire. These sub-national outcomes provided our starting point in terms of identifying what we wanted our LSTF proposals to contribute to.

These outcomes, in combination with the LSTF criteria, helped guide the identification of five key challenges to which options included within our *Initial Proposal* needed to respond. These challenges (section 2.6), which were, in essence, our objectives, provided the parameters for option generation.

Developing the Targeted Approach

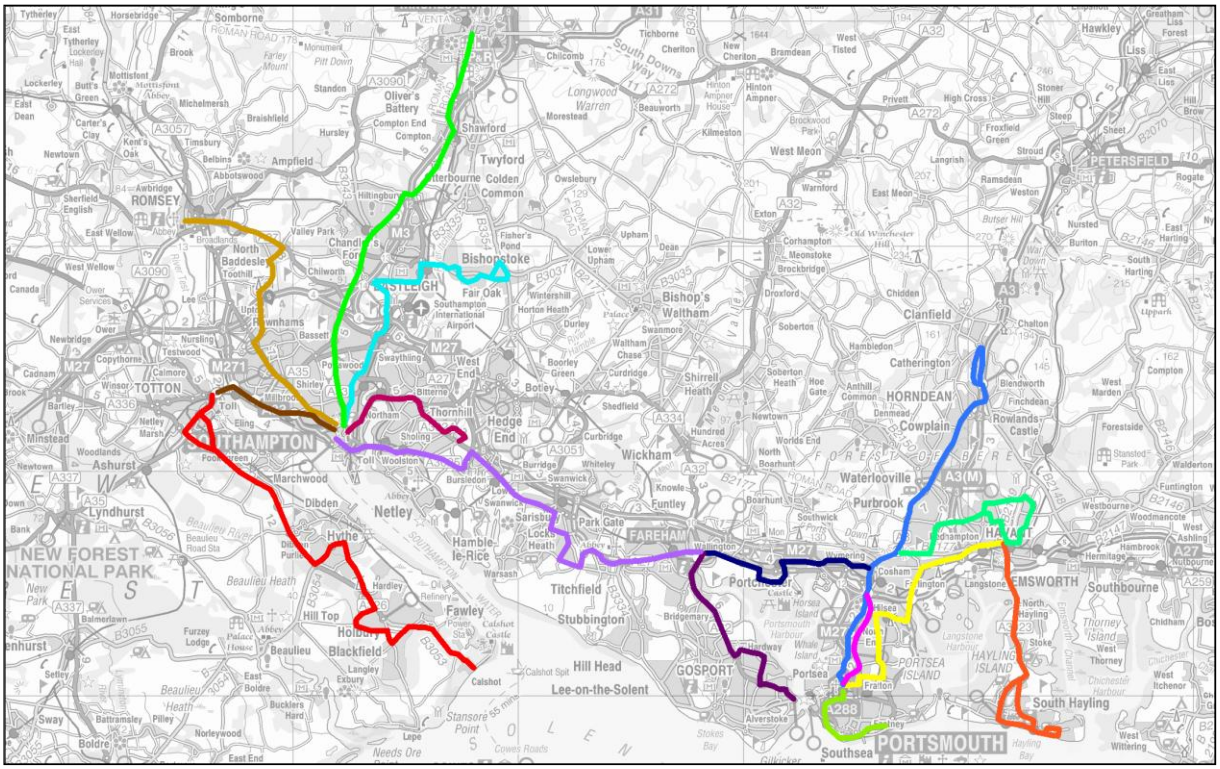
The overriding imperative for our *Initial Proposal* was for transport interventions to facilitate economic growth and reduce carbon within the Fund period, whilst also being self-sustaining and providing benefits in the longer term. It was clear that a highly focussed approach was necessary, targeting intervention where greatest impact could be realised against the dual policy drivers. However, in responding to the objectives and the policy drivers it was important to also focus our strategy spatially in order to target intervention where we would realise greatest benefit.

As described in section 2.2, the PUSH Spatial Strategy and Economic Development Strategy both promote a *Cities First* principle. *Cities First* is the phrase coined to describe an approach of prioritising and focussing new development, economic growth, and regeneration at the urban core of the cities and towns of South Hampshire as the most sustainable locations for growth. Our approach, therefore, was guided by a desire to target transport interventions at improving sustainable access to urban centres in order to support the *Cities First* principle and ensure our proposals align with, and facilitate, the wider growth strategy for South Hampshire.

Flowing from the above, and in consultation with the local transport operators, the principle of '*backing the winners*' was adopted for our proposals. The focus for interventions would be prioritised along those radial corridors into our urban centres (where the majority of employment exists and where the majority of new employment will be located) that exhibited the conditions to efficiently, effectively

and significantly grow the public transport and active travel mode share. Part of the premise for this approach is that there is insufficient space to add highway capacity along these corridors to accommodate unrestrained growth in car travel. An intentional by-product of this mode shift approach would be that forecast growth in congestion would be eased and some highway capacity would be released to improve journey time reliability and thus improve productivity.

Fifteen corridors were identified within the *Initial Proposal*, along which good quality passenger transport services operate and which link employees and employment and customers and markets. The identification of this initial set of 15 corridors was informed by discussion with the transport operators and an understanding of the socio-economic geography of the area. These 15 corridors are shown in *map 2.13.*



Map 2.13: 15 Corridors Identified in Initial Proposal

The key transport interchanges along the corridors were also identified as foci for interventions to improve their accessibility and utility, with the aim that public transport interchanges and key bus routes would be better integrated within a web of active travel and wider public transport options. The combination of these corridors, their characteristics and an underlying ambition to increase the mode share of public transport and active modes for access to employment centres helped focus optioneering.

In consideration of the above our package sought to target urban economic centres, focus on key public transport corridors that already provided a frequent commercially viable service, and on public transport interchanges in order to spread the impact of interventions amongst high concentrations of people.

Initial Proposal Option Generation

The initial options emerged from a number of sources following a literature review, which included (amongst others):

- Recent TfSH studies (most notably the *Urban South Hampshire 2014-19 Delivery Strategy*[10] and the *TfSH Reduce Strategy*[11])
- An audit of the quality of public transport interchanges
- Outputs of Bus Punctuality Improvement Partnerships and other passenger consultation groups
- The emerging evidence base
- The Joint South Hampshire Local Transport Plan (2011)
- Case studies of what had worked well elsewhere (including the Sustainable Travel Demonstration Towns and Smarter Travel Sutton).

The consultation feedback[12] from the LTP3 process was particularly useful in informing the type of interventions for inclusion within our package. For example, our residents and businesses explicitly told us that we should accord *'increased modal share for public transport and active travel'* and '*reduced need to travel and reduced dependence on the private car'* the highest priority for delivery. In addition, stakeholders told us that policies that '*promote active travel modes and develop supporting infrastructure and deliver high quality road-based public transport networks that are accessible, easy to use and are supported by appropriate priority measures'* should be given the highest priority.

The *TfSH Reduce strategy* was a key supporting document. It aims to influence travel behaviour and widen travel choice in order to:

- reduce the need to travel
- maximise the number and proportion of journeys made by alternative modes to the private car
- contribute to wider environmental and health benefits, such as reducing carbon emissions and improving air quality

This was a particularly detailed resource that helped inform optioneering.

[10] TfSH (2010) Urban South Hampshire 2014-19 Delivery Strategy – Interim Report.
[11] TfSH (2010) TfSH Reduce Strategy. [online] Available from: http://www3.hants.gov.uk/reduce_strategy.pdf
[12] HCC (2010) LTP3 Summary of Consultation Summary.

Initial work on the *Reduce Strategy* identified a wide range of potential measures that could be incorporated with the Strategy. The potential measures were broken down into three key areas:

1. **Smarter Choices** includes the range of generally "*softer*" measures that aim to influence travel behaviour and have been defined by ACT Travelwise as "*a variety of methods and initiatives which reduce the negative impacts on congestion, carbon emissions, the environment and health*". Examples include workplace travel planning, personalised travel planning and promoting car sharing.
2. **Land Use Planning** includes the range of measures that can be applied to new developments through the land use planning process. This includes strategic spatial land use policies controlling the location, design and layout of development and how these policies are applied on individual planning applications.
3. **Demand Management** measures were originally considered by the Reduce Strategy, but it was felt more appropriate to incorporate these into a Manage Strategy.

A considerable amount of research was examined to determine what the *Reduce Strategy* could achieve in terms of travel behaviour. It was concluded that a ten year intensive Smarter Choices programme could reduce urban base peak hour traffic flows by up to 15%, although this would not be evenly spread across South Hampshire.

Professor Phil Goodwin (a leading academic on the transport interventions proposed within the *Reduce Strategy)* was appointed by TfSH in December 2009 to undertake a peer review[13] of the *Reduce Strategy*. His review was supportive of the approach and confirmed that South Hampshire would be suitable location for the application of such measures. The peer review considered in some detail the evidence on Benefit:Cost Ratios (BCR) for *Reduce Strategy* measures, and concluded that these would be in double figures.

The peer review also considered the interaction between the *Reduce, Manage* and *Invest* options and provided a clear message that all three need to be managed and delivered together in a consistent and complementary way. This is a principle that we have adopted for our LSTF proposals.

To support the option generation process a LSTF Steering Group was established, which included representation from business, academia, Sustrans, and transport operators. Separate discussions were also held with South Hampshire Bus Operators Association (SHBOA), and at a workshop with District Council colleagues (recognising that the Hampshire County Council highway area of TfSH operates within a two-tier administrative structure).

[13] Goodwin, P (2010) Independent Review of the TfSH Reduce Strategy. [online] Available from: http://www3.hants.gov.uk/reduce_strategy_review.pdf

Emerging from the above a list of initial options for consideration was developed. These were sifted against criteria made up of the following:

- LSTF objectives
- The 15 corridors
- The (above) five local objectives.

The sifting methodology employed a scale of impact of each intervention against each criteria element, assessing *High, Medium,* and *Low* impact. Those interventions that did not have a positive impact on the core LSTF criteria, on one or more of the 15 corridors, or on one or more of the 5 local challenges, were sifted out. This approach is consistent with the DfT's Early Assessment and Sifting Tool (EAST) in that it quickly summarises and presents evidence on options in a clear and consistent format, by presenting relevant, high level, information so that an early view can be taken on how options perform and compare.

Following the initial sift a workshop was held where we:

- Sense-checked results of the sift
- Considered the interventions within the context of the project approach (focussing on key corridors and interchanges, and targeting urban and employment centres), and within the context of the local socio-economic factors particular to each corridor to improve targeting
- Cross-referenced against committed investment to seek opportunities to maximise benefits
- Cross-referenced against available developer contributions
- Considered the reach of interventions, particularly on the behavioural change elements.

Sense-checking resulted in three interventions, identified as having a low impact on one of the local objectives being retained for consideration:

- Greenfleet initiatives such as driver behaviour change, unattended delivery, service freight initiatives, managed loading bay booking, smart tagging shared freight/Public transport vehicles and fleet vehicle partnership
- Marketing of key corridor bus services
- Legible bus networks.

These were retained as it was deemed that, whilst these did not impact upon the objective of *Improving levels of physical activity and reducing obesity through active travel*, they had the potential to positively impact on a range of the criteria and as such it would be unreasonable to overlook their potential within our proposals.

In addition, options which, whilst not assessed as having a *low impact* on the core LSTF criteria, on one or more of the 15 corridors, or on one or more of the 5 local objectives, (i.e. they performed well) were out-performed by similar interventions or could be merged with other interventions. An example of this was the removal of an intervention that would have included rail within smart ticketing. The inclusion of rail was assessed as undeliverable within the LSTF period as a result of the existing dominant rail franchise covering South Hampshire having six years to run and a significant increase in scheme cost. This is something that we would hope to promote through franchise negotiations, in due course.

The results of this analysis are shown in *Appendix 2.1*, which splits interventions into two groups; those retained and those sifted out.

Proposals Included Within the *Initial Proposal*

The area-wide smart ticketing solution – focussing on bus and ferry travel - emerged as the key option that was felt to have the potential to attract more people to bus and ferry travel and improve the service quality for existing users. Importantly there was significant operator support, including financial support, for this proposal. The remaining interventions that were identified as according with the key criteria and have application within the South Hampshire context could be categorised as either behavioural change or physical interventions. The three broad strands emerged:

- Smart-ticketing and media
- Behavioural change interventions
- Physical Interventions

The process described above, enabled the formation of a coherent package of targeted physical interventions and accompanying behavioural change initiatives along key radial corridors into our poly-centric urban area, connecting people with employment, and underpinned by a South Hampshire-wide inter-operable public transport smart ticketing solution. These interventions formed our *Initial Proposal*, which is provided within *Appendix 2.2*.

The broad basket of measures contained within the *Initial Proposal* are shown in *figure 2.41*.

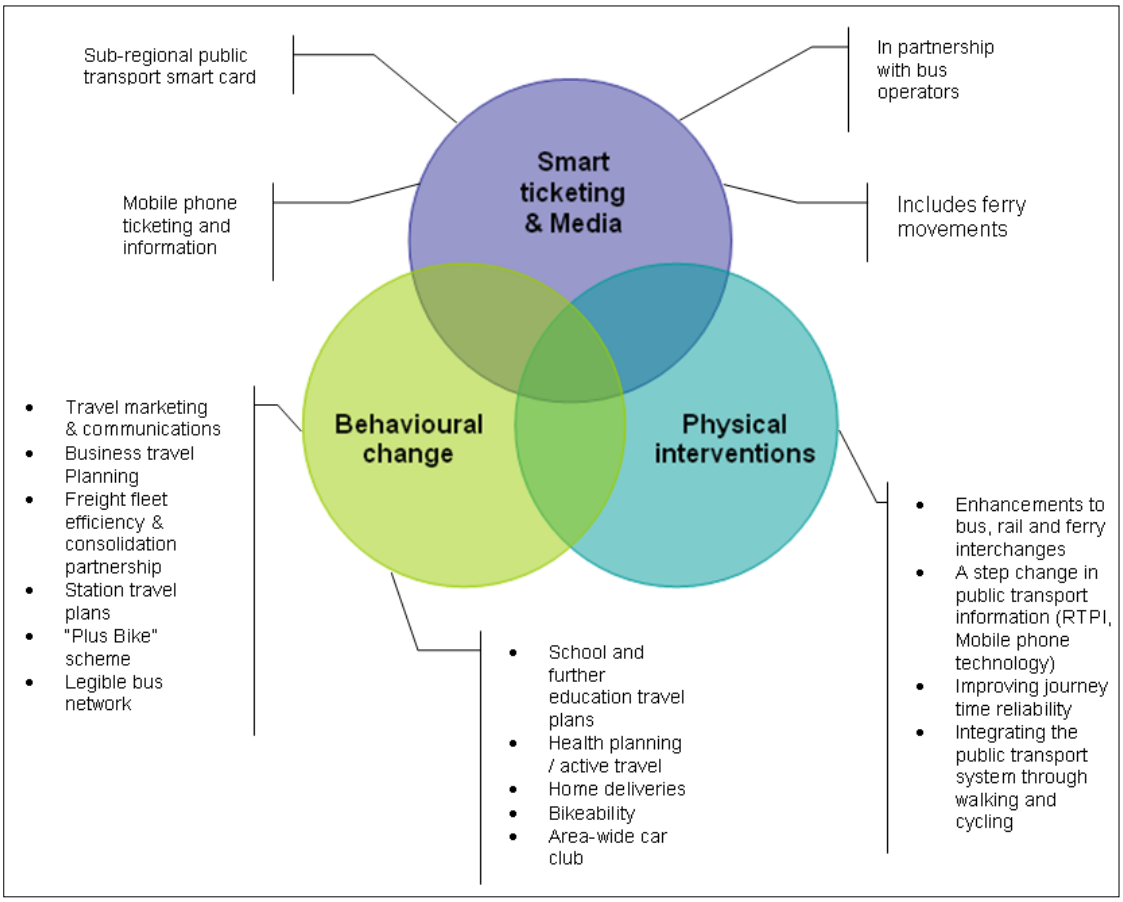


Figure 2.41: Broad Components of the Initial Proposal

Validating the Proposals

As discussed above, the LTP3 consultation feedback provided evidence to afford confidence that the interventions proposed would be supported by local people and deliver modal shift.

Further evidence was provided by the results from a travel attitude survey covering 1,500 households spread evenly across MOSAIC groups in April 2011. The 20 minute telephone survey was designed to:

a) Enable the right measures to be targeted at the right sections of the population

b) Establish a baseline to measure the success of the proposed behaviour change interventions.

As part of the survey, the behavioural change interventions of the *Initial Proposal* were described to residents; 86% of Southampton residents and 75% of Portsmouth residents agreed that these are the kind of initiatives that should be invested in. In addition, the survey also identified a latent demand for public transport and active modes; 37%, 28% and 21% of respondents stated that they were more likely to walk, cycle and use public transport, respectively, next year (2012).

The LSTF Steering Group (described above) provided a useful validation of the package, as did discussion with transport operators through SHBOA.

2.7.2 Refining the Initial Proposal for Business Case Submission

Following DfT short-listing of our *Initial Proposal* for business case development it was felt pertinent to review the *Initial Proposal*, to ensure alignment with changing contexts. Section 2.2.6 describes the changes to the local landscape since the submission of the *Initial Proposal*, but to summarise, the designation of the Daedalus site on the Gosport peninsula as an Enterprise Zone (EZ), continued economic fragility, and an improved evidence base are key factors that have resulted in a slight re-focussing and reviewed targeting of our proposals.

The EZ at Daedalus has presented a particular opportunity. Targeting interventions at improving sustainable connections between Daedalus and the appropriately-skilled workforce in Gosport provided the opportunity to internalise transport movements and so reduce the significant congestion issues on the access routes onto the peninsula. Not only will our proposals improve the accessibility of the EZ to local employees, but will subsequently reduce worsening congestion, reduce the transport costs associated with locating and working at the EZ, and so improve the attractiveness of the EZ as a location for new business.

Our evidence base has improved significantly since the submission of the *Initial Proposal* as we now have the ability to evidence current and future transport problems and opportunities through the Sub-Regional Transport Model (SRTM).

In consideration of the local contextual changes and improved evidence base, the 15 corridors were reviewed to ensure that proposals were appropriately targeted at the barriers and would represent greatest return on investment. The review assessed each corridor in terms of the transport barriers, refreshed objectives and socio-economic demography and geography. As identified in section 2.4, the following key commuting corridors have been identified by the evidence base:

1. Eastleigh to Southampton (both ways)
2. Havant to Portsmouth (both ways)
3. Gosport to Fareham (both ways)
4. Fareham to Portsmouth (one way)
5. External of TfSH to Southampton (both ways)
6. New Forest to Southampton (both ways)
7. Havant to External of TfSH (one way)
8. Eastleigh to Winchester (Core) (one way)
9. External of TfSH to Portsmouth (one way)

A review of the area context and of the key transport problems have identified the two cities and Gosport as areas that experience acute transport problems and offer opportunities, particularly with regard to supporting those sectors that will drive economic and employment growth in South Hampshire.

In addition to the outputs of the SRTM, we have sought to improve targeting of interventions through MOSAIC analysis to focus on those groups along the corridors identified as having a higher propensity to change their travel behaviour.

The MOSAIC analysis has been undertaken at an area wide level and also at a more detailed level for Southampton. Time has precluded our ability to carry out the in-depth MOSAIC analysis for the rest of the TfSH area, but this will be undertaken post submission of the Business Case to inform delivery. The more detailed assessment for Southampton, which built on the travel attitude telephone survey described above, is provided in appendix 2.3, whilst the area wide analysis is described below.

Beginning with the 15 MOSAIC Groups, each was classified according to its likely response to sustainable transport interventions and therefore, its propensity to change travel behaviour. Each group was assessed as being either:

- *most likely to respond positively*
- *may respond positively*
- *unlikely to respond positively or already using public transport or active modes.*

With regard to the latter, we wanted to make the distinction between groups that are currently unlikely to be using sustainable modes of transport and those that exhibit sustainable travel behaviour. Whilst we seek to reinforce sustainable travel behaviour, we felt it important to focus attention on those groups currently not exhibiting sustainable travel behaviour, but that were likely to respond positively to appropriately targeted interventions. The results of this analysis are shown in *table 2.12.*

A sensitivity check against the geographic spread of those groups that are likely to already be using sustainable modes revealed that such groups were also co-located within the corridors.

Mosaic Group	Most likely to respond positively	May respond positively	Unlikely to respond positively or already using sustainable modes
A Residents of isolated rural communities			
B Residents of small and mid-sized towns with strong local roots			
C Wealthy people living in the most sought after neighbourhoods			
D Successful professionals living in suburban or semi-rural homes			
E Middle income families living in moderate suburban semis			
F Couples with young children in comfortable modern housing			
G Young, well-educated city dwellers			
H Couples and young singles in small modern starter homes			
I Lower income workers in urban terraces in often diverse areas			
J Owner occupiers in older-style housing in ex-industrial areas			
K Residents with sufficient incomes in right-to-buy social housing			
L Active elderly people living in pleasant retirement location			
M Elderly people reliant on state support			
N Young people renting flats in high density social housing			
O Families in low-rise social housing with high levels of benefit need			

Table 2.12: Expected Propensity to Change of Each MOSAIC Group

A further assessment was then carried out, which assessed each of the 15 MOSAIC groups in terms of factors that may influence their ability to change travel behaviour (financial, health, and environmental concern). The results of this analysis are shown in *table 2.13.*

MOSAIC Group	Financial	Health	Environmental concern	Ability / need to change
A Residents of isolated rural communities	N	N	N	L
B Residents of small and mid-sized towns with strong local roots	Y	Y	Y	H
C Wealthy people living in the most sought after neighbourhoods	N	Y	Y	H
D Successful professionals living in suburban or semi-rural homes	Y	Y	Y	M
E Middle income families living in moderate suburban semis	Y	Y	Y	M
F Couples with young children in comfortable modern housing	Y	Y	Y	L
G Young, well-educated city dwellers	N	Y	Y	H
H Couples and young singles in small modern starter homes	Y	Y	Y	H
I Lower income workers in urban terraces in often diverse areas	Y	N	N	M
J Owner occupiers in older-style housing in ex-industrial areas	Y	N	N	M
K Residents with sufficient incomes in right-to-buy social housing	Y	N	N	M
L Active elderly people living in pleasant retirement location	N	Y	N	M
M Elderly people reliant on state support	Y	N	N	L
N Young people renting flats in high density social housing	Y	N	N	M
O Families in low-rise social housing with high levels of benefit need	Y	N	N	L

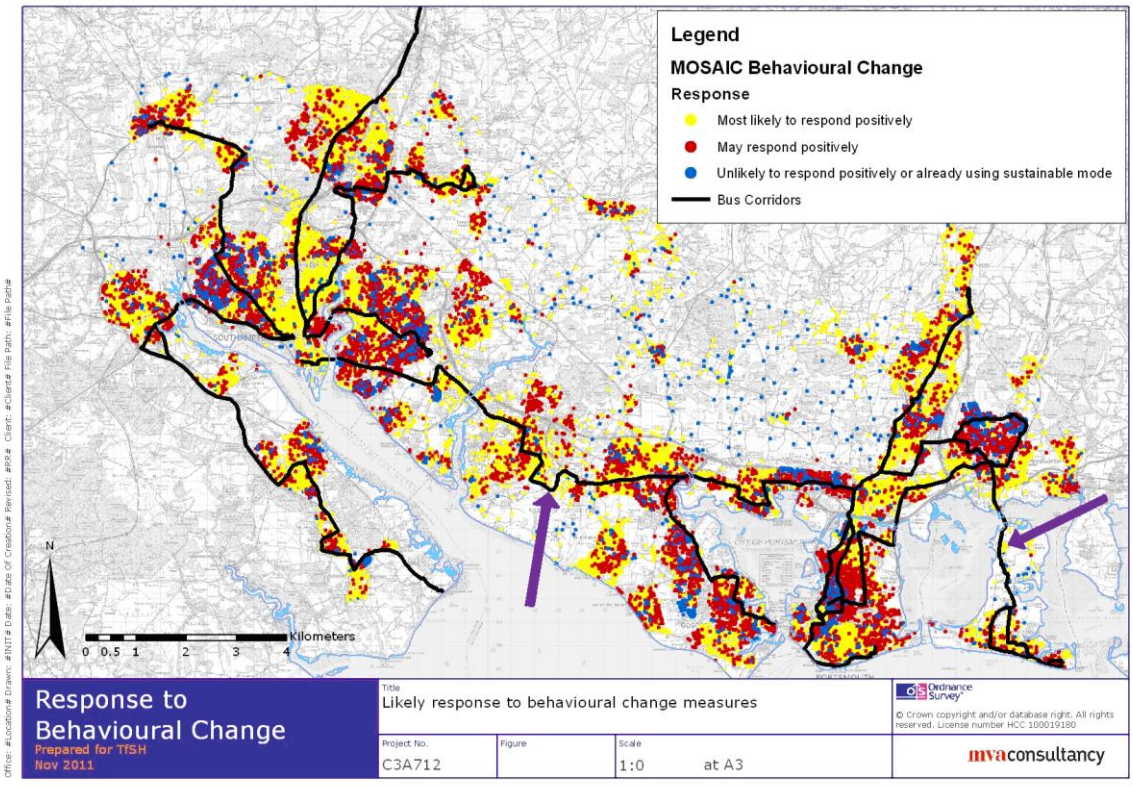
Table 2.13: Assessment of MOSAIC Groups and Influencing Factors

The results of this analysis are summarised in table 2.14:

Target Groups	MOSAIC type
Most likely to respond positively	B, C, D, E, G, H
May respond positively	F, I, J, K, L, N
Unlikely to respond positively or already using sustainable mode	A, M, O

Table 2.14: Assessment of MOSAIC Groups and Influencing Factors

The three broad MOASIC groupings were then plotted on a map, along with the 15 corridors (*map 2.14*). This identified that two corridors (Hayling Island and another between Fareham and Southampton) targeted by the *Initial Proposal* had limited concentrations of those groups identified as *most likely to respond positively*. In consideration of this, these two corridors (identified in *map 2.14* by purple arrows) were removed from our proposals, along with the interventions they contained.



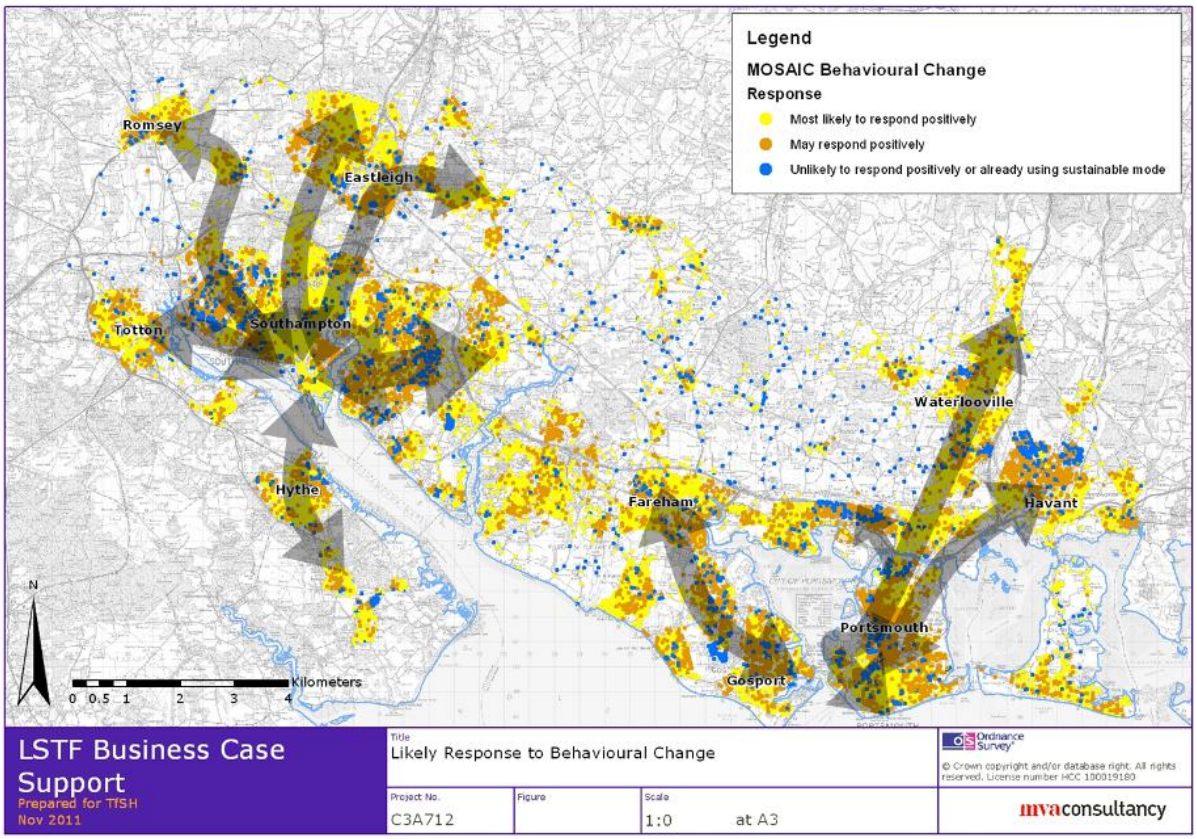
Map 2.14: Map Showing 15 Transport Corridors of the Initial Proposal with MOSAIC Results

The socio-economic data presented in Section 2.2 was also utilised when reviewing the corridors to ensure issues appertaining to employment opportunities, skills, and labour market indicators were captured.

A number of the barriers (described in Section 2.5) identify highway journey time delays under a *do minimum* scenario in which there is a continuation of current travel habits (and indeed, a reversal of some sustainable habits as a result of increasing congestion) and an increase in transport demand resulting from growth in housing, population and employment. It was important to capture the most severe incidences of current and future forecast highway delays within the corridors to ensure that a viable alternative to the car existed in those areas to reduce the severity of these forecast delays. These are shown in *maps 2.11* and *2.12*, in section 2.4.

Using the improved evidence provided by the SRTM and MOSAIC analysis, the number of corridors to be targeted by our LSTF proposals has been rationalised from 15 to nine; these are shown in *map 2.15*. The nine corridors combine corridors previously split along bus routes and omit altogether, two corridors (Hayling Island and Fareham to Southampton). Our assessment revealed that the omitted corridors captured low concentrations of groups identified as most likely to be use sustainable modes and were likely to derive lower levels of benefits than could be achieved by focussing investment on the core nine corridors. The Waterside to Southampton corridor was also amended to focus on the Hythe to Southampton ferry route. Hythe is the largest settlement in the Waterside area and had a concentration of groups identified as *most likely to respond positively*. It also represented the key interchange in the Waterside area. A review of the other settlements in the Waterside area along with discussions with ExxonMobil, identified that many people, particularly around Hardley and Fawley, work locally and do not travel into Southampton for work.

The final nine corridors were presented to bus operators for comment at a Bus Punctuality Task Force Meeting (attended by all local bus operators) on the 27th October 2011, and were met with agreement.



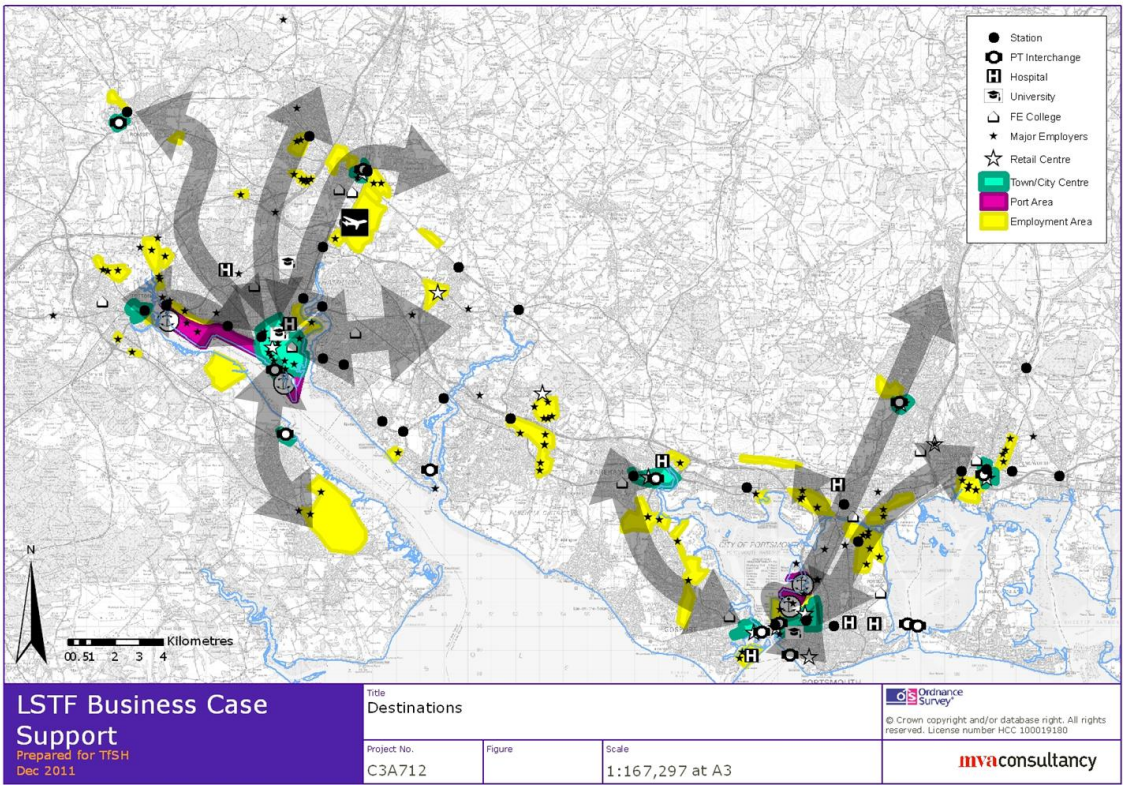
Map 2.15: Nine Corridors Along Which Interventions will be Targeted

The corridor refinement has enabled our proposals to be further targeted where the greatest benefits can be realised against the dual LSTF core policy drivers of economic growth and carbon reduction, and against our local objectives. The nine corridors focus on connecting high population densities with employment opportunities through public transport and active modes, and capture the most severe incidences of current and future forecast highway delays as well as those groups that have been identified as likely to be most receptive to sustainable transport interventions.

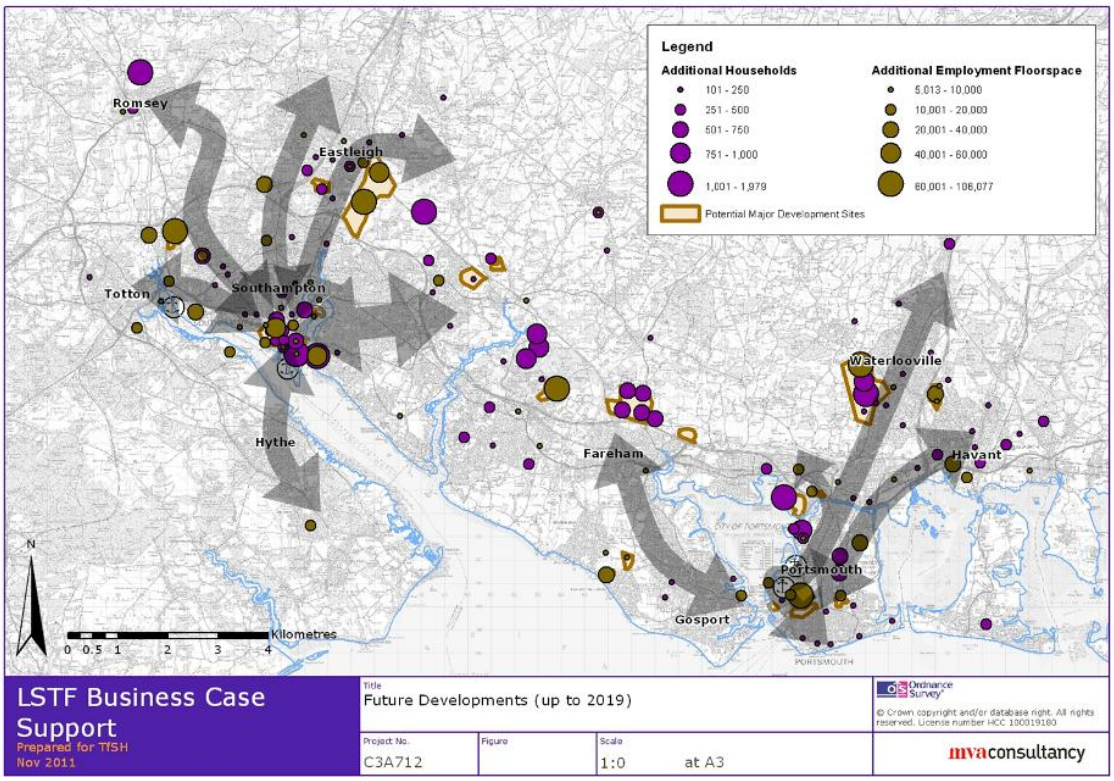
Principally the corridors connect the two cities with their hinterlands, whilst the Gosport peninsula is also identified for specific intervention to tackle particularly acute transport barriers and wider policy objectives. Our corridor approach aims to improve two-way movements, the need for which has recently been evidenced by a *Centre for Cities* Report[14]. The report identified a spatial mis-match between low skilled workers and low skilled employment. The latter has shifted from the core to the periphery in recent decades, leaving low-skilled workers behind in the urban core, and having to absorb increased transport costs to access employment.

[14] Centre for Cities (2011) Access All Areas: Linking People to Jobs. [online] Available from: http://www.centreforcities.org/access.html

Map 2.16 shows the nine corridors in relation to key destinations; *map 2.17* shows them in relation to planned future housing and employment development.



Map 2.16: Nine Corridors in Relation to Key Destinations



Map 2.17: Nine Corridors in Relation to Planned Future Housing and Employment Development

Through the corridor sift, there were schemes that fell out of the proposals as they were located along omitted or amended corridors. However, this has enabled an increased level of intervention to deliver further benefits on those corridors that show the greatest potential to realise increased levels of sustainable travel behaviour.

The additional time since submission of the *Initial Proposal* has also provided an opportunity to undertake a more detailed review of individual proposals in the context of wider transport implementation programmes. In particular, our proposals align with and are mutually supportive of the Smarter Travel Southampton LSTF tranche 1 programme, and with the Portsmouth City Council LSTF tranche 2 proposals. Whilst outside of the TfSH area, links are also being explored between the Hampshire County Council LSTF tranche 1 programme, particularly with regard to realising procurement efficiencies and to provide consistent branding across the wider Hampshire area.

As described earlier, a workshop event held to validate the current and future transport problems identified by the SRTM helped confirm that through these LSTF proposals we are targeting validated transport problems. In addition, stakeholders were invited to consider potential solutions to these transport problems, and identified a range of measures that are proposed within this Business Case. In particular, the following were identified:

- Integrated public transport smart ticketing
- Better quality bus infrastructure
- Improved transport interchanges
- Travel Planning – particularly at large employment sites
- Real Time Passenger Information (RTPI)
- Improved travel information
- Improvements to the public realm to encourage walking
- Bus priority measures
- Good pedestrian and cycle links to public transport services

The improved evidence available to us for the development of this business case has resulted in a confirmation and thus a continuation of the strategy developed for the *Initial Proposal*. However, the package of interventions, underpinned by a area-wide smart ticketing solution, is now better targeted across and within nine corridors. The proposals will:

- Connect people to jobs
- Support and align with the Solent LEP and PUSH economic growth agenda
- Tackle evidenced barriers
- Accord with the LSTF criteria and the local objectives
- Target corridors that exhibit the socio-economic and geographical characteristics to successfully deliver an increase in public transport use and active travel

The three broad categories of intervention remain:

- An interoperable smart ticket for bus and ferry travel
- Area-wide and corridor specific behavioural change interventions
- Physical interventions along nine corridors and at interchanges.

A high-level analysis of these broad categories has been undertaken using DfT's Early Assessment and Sifting Tool (EAST). The assessment (provided in appendix 2.4) demonstrates that our proposed package of measures exercise an excellent fit with the five transport business cases. The detail of our proposals, along with the underpinning rationale, is described in the next section.

2.8 Detailed Description of Project and Rationale

Section 2.8 Headlines

In order to best respond to the six local objectives, we have identified a package that has three broad components:

- An interoperable smart ticket for bus and ferry travel
- Area-wide and corridor specific behavioural change interventions
- Physical interventions along nine corridors and at interchanges

These mutually supportive interventions will provide genuine travel choice to ensure that the forecast significant growth in trips is accommodated in a sustainable way. This will result in:

- 24% increase in public transport patronage
- an increase in active mode trips of 9%.
- mode shift from the private car (a 5% reduction by 2026 on 2010 levels)
- reduced congestion and journey time delay for all highway users
- improved journey time reliability for all highway users
- a strengthening of the role of our three international gateways and our city centres
- reduced carbon output of 25,750 tonnes per annum
- over 1,141 new jobs to 2019 and 1,529 new jobs to 2026, directly created
- help facilitate the 56,300 new jobs to be created in South Hampshire by 2026
- a wider labour market for employers
- improved employment horizons
- support for our growth sectors
- a BCR of 8.5:1
- £253m of benefits
- improved access for all
- improved levels of health and physical activity

This section describes in detail the sustainable transport measures that we will deliver in South Hampshire to support economic growth and carbon reduction. A rationale for their inclusion is provided, along with a mapping our proposals against the transport barriers and our local objectives.

First, an overall summary of the project is provided at the macro scale, linking back to the 28 barriers identified in earlier sections. A detailed description and rationale of our proposals is then presented. A number of case studies are then provided, evidencing where our proposals are working well and therefore helping to provide confidence of successful delivery in South Hampshire. Finally, a summary of the Strategic Case is presented including highlighting how the proposals work together as a package, the benefits they will deliver, and how they perform against our local objectives and the LSTF criteria.

Our proposals are mapped against the 28 barriers identified in section 2.5, and the local objectives identified in section 2.6. Performance against barriers is mapped using the following colour-coding:

	Tackles the barrier
	Partly tackles the barrier
	Does not tackle the barrier

This section concludes with a summary of how the proposals are mutually supportive and form a coordinated package to facilitate sustainable economic growth in South Hampshire.

2.8.1 Summary of Proposals and Broad Rationale at the Macro Scale

It has been identified in section 2.4 that in the absence of transport intervention, transport will demonstrably act as a constraint on sustainable economic growth. Section 2.2 identified where interventions should be targeted to facilitate the preferred growth scenario for South Hampshire as set out in the PUSH EDS and as adopted by the Solent LEP.

The areas that have been evidenced as having particularly acute transport problems across a range of measures are Southampton, Portsmouth and Gosport. These locations were also identified within section 2.2 as suffering with significant pockets of deprivation, economic inactivity and health problems. Critically, these areas have been identified as locations within which those sectors for which South Hampshire has a competitive advantage and have the potential to drive forward economic and employment growth, are located. More generally, the interactions and flows of people and freight throughout the TfSH area are forecast to come under further constraint as demand for highway space increases.

The presented evidence has identified a strong case for transport intervention targeted at:

- Improving the quality of alternative modes to the private car along key corridors – particularly between the two cities and their hinterlands and also to and from Gosport
- Encouraging mode shift from the car, targeting those short-distance trips that could be undertaken by public transport or active modes to reduce carbon,

improve health and release highway capacity for strategic movements – particularly to our international gateways and economic centres

These are captured within the six local objectives outlined in section 2.6.

In order to best respond to the six local objectives, we have identified a package that has three broad components:

- An interoperable smart ticket for bus and ferry travel
- Area-wide and corridor specific behavioural change interventions
- Physical interventions along nine corridors and at interchanges.

Together, these proposals aim to raise the quality of public transport and active modes and offer genuine travel choice to ensure that the forecast significant growth in trips is accommodated in a sustainable way to enable the local economy to flourish.

Whilst smart ticketing and elements of the behavioural change programme will have TfSH-wide application, other aspects of our behavioural change programme and the whole of the physical interventions programme will be applied along nine key corridors.

An analysis of commuting movements (section 2.4) identified the key commuting corridors in South Hampshire. These were considered along with MOSAIC analysis (section 2.7) to inform the identification of the nine corridors along which interventions are targeted within our proposals (map 2.15, above).

2.8.2 Detailed Description and Rationale for Interoperable Smart Card

Forecast increases in demand for our highway network result in a highly undesirable future for South Hampshire with consequential impacts on sustainable economic growth and the quality of life of our residents. Efficient and attractive public transport has been identified as a key transport component to enable South Hampshire to realise sustainable economic growth. Public transport is a means through which economic growth can be achieved while ensuring that the demand for travel can be met in a sustainable way, providing an alternative to car use for many journeys and bringing environmental benefits.

What We will Deliver

In partnership with bus and ferry operators, we will deliver a fully interoperable, ITSO (Integrated Ticketing Smartcard Organisation) compliant smart card that will provide the link between *operators and modes* to give the best possible products to transport users – making public transport seamless, easier to use and cheaper as well as promoting patronage growth.

Partnership working has been key to developing these proposals, with regular liaison with SHBOA. Investment by the partners will take place to improve the on-bus

ticketing offer through the introduction of innovative ticket products and delivery systems, including smart ticketing applications to reduce bus stop dwell times and achieve a reduction in the proportion of cash fare payers. The proposal will also enable the use of smart ticketing systems on local ferry movements that form an important part of our transport network. Different products can be stored on one card to make multi-modal and multi-operator journeys easier and so improving access to work throughout the area.

The benefits of Smart Ticketing are expected to include:

- Full interoperability to ITSO standard across South Hampshire (between bus companies then extending to ferries)
- Flexible journey based product (e.g. Multi-day, variable length season tickets, etc.)
- Improved customer insight through knowledge of journey patterns
- Loyalty programs
- Demand management through use of “shoulder peak fares”
- Auto top-up
- Reduced queue and boarding times
- Development of Near Field Communications (NFC) Technology and Mobile ticketing, as well as the development of smart applications & other new technology
- Potential extension to rail, bridge tolls, car clubs, cycle hire in time.

The project aims to increase patronage on all forms of public transport through:

- A better quality public transport experience for users
- Increased bus reliability, resulting from reduced boarding times
- Seamless integration of ticketing for public transport journeys involving interchange between modes
- Providing opportunities to apply tactical pricing mechanisms to generate increased patronage.

Delivery of Smart Ticketing

Delivery is expected to take place through an evolutionary approach where a straightforward Local Authority Partnership would be used for the initial phase with the formation of a separate or more formal joint-venture arrangement between the operators and local authority partners taking place later on. Both Go-Ahead Group and First Group, as well as local independent operators have been heavily involved in

the working group on taking forward our local work to inform the LSTF bid and to develop the work further.

The programme of phased implementation between 2012 and 2017 will concentrate on the following products, which include a multi-operator, initially bus-based, travelcard scheme extending to ferry generally rolled out as:

- SoSmart Solent Travelcard for Annual and Quarterly Season Tickets
- Bus Operator migration to the SoSmart scheme where existing systems do not already exist
- Ferry Ticketing
- Operator Season Tickets as they become available
- SoSmart multi-operator bus and bus/rail day ticket
- Ferry and bus season ticket
- Establishment of a cash purse (where a fare is deducted from the SoSmart product) by the end of the funding period.

Options to extend the card to include rail travel will be explored with Network Rail and DfT as part of the 2017 South Western rail franchising process.

Development of the Smart Ticketing Proposal

Costs have been worked up in an incremental manner, which firstly considers the investment required to deliver a system that, whilst fully configurable, works at "go live" for English National Concessionary Cards and the Solent Travelcard as well as the standard generic products defined nationally in the ITSO specification. Costs have then been worked up for a scheme extending to Ferries and then Rail as well as operator specific products.

Bus Operators have been heavily engaged in terms of developing the bid through SHBOA, who has provided commercial and technical input into the Memorandum of Understanding (MoU) between the operators and the local authorities. This was signed in December 2011 and is provided in Appendix 2.5. The MoU commits all signatories to work together to deliver smart ticketing in South Hampshire. Detailed contracts will be developed between each spending authority of TfSH and operators in early 2012 so that the scheme can commence roll out should funding be confirmed.

Specifically, work is concentrating on how the scheme will be designed and built to deliver a fully interoperable and extendable ITSO multi-modal smart ticketing platform which identifies:

- a smart card data back office – the so-called ITSO AMS-HOPS or Asset Management System and Host Operator or Processor System, which handles both operator/ product details and key distribution as well as collecting and assuring transaction data

- a payment system – for concession reimbursement or commercial revenue apportionment/ payment
- a sales network of equipment, where smart cards can be obtained as part of the initial transaction. This implies some degree of staffing (some may be deployed independently of the transport network, others potentially in conjunction with some of the modes, e.g. ferries)
- an additional overlay of a sales network, including on-line, in person and postal, which is both automated and has a degree of customer self-service for product top-ups and renewals
- usage equipment on buses, ferries, Hovercraft and at heavy-rail stations
- Smart cards and other smart ticketing that may be developed over the period on which there is consensus with operators to bring forward collectively (e.g. NFC etc).

The Local Transport Authorities and Transport Operators are working together on how the following elements will be delivered:

- Governance and Project Management
- Commercial and Technical Support
- AMS-HOPS
- Card Management and Issuance System;
- Reimbursement and Payment System
- TVM and ETM Upgrades and/or Replacement
- Equipment, ownership and maintenance responsibilities
- Marketing and Promotion & Branding.

Ferry operators are keen to enter into similar agreements as those with bus operators to enable a fully multi-modal offer. TfSH authorities and ferry operators will work on an MoU as well as developing contracts to ensure delivery during early 2012.

Product Development & Delivery	
Oct 2012 – Sep 2013 (2012/13 Q3 – 2013/14 Q2)	Roll out of ITSO compliant Electronic Ticket Machines (ETMs) on Buses
Oct 2012 – Sep 2013 (2012/13 Q3 - 2013/14 Q2)	Specification & Development of Multi-Operator Bus Scheme
Oct 2013 – Dec 2013 (2013/14 Q3)	Buses fully equipped with ITSO compliant ETMs
Oct 2013 – Dec 2013 (2013/14 Q3)	Multi-Operator Bus Scheme goes live
Apr 2013 – Sep 2014 2013/14 Q1 – 2014/15 Q2	Roll out of ITSO compliant ETMs on Ferries
Oct 2014 – Dec 2014 2014/15 Q3	Ferries fully equipped with ITSO compliant ETMs
Oct 2013 – Sep 2014 2013/14 Q3 - 2014/15 Q2	Specification & Development of Multi-Modal, Multi-Operator Bus & Ferry Scheme
Oct 2014 – Dec 2014 2014/15 Q3	Multi-Modal, Multi-Operator Bus & Ferry Scheme goes live

Rationale and Fit with Barriers and Local Objectives

Public transport needs to be seen as a “quality” mode of choice to incentivise growth in patronage. Rail commuting is generally seen as a relaxing, convenient, quick, reliable and comfortable option. As a result rail passenger growth in South Hampshire is very healthy and forecast to grow by 9% (2010-26) in the absence of intervention. The perception of the bus by non users is a different story and this is reflected in the forecast 1% fall in patronage (2010-26) in the absence of intervention, despite a greater number of total trips across all modes.

The reality is now far different to perception as buses have become cleaner, smarter and more comfortable. The UniLink Bus service in Southampton is an example of a service which has increased patronage from 1m to almost 6m passengers per year, partly through the use of a smart card, in less than six years. The bus company’s investment in quality buses, easy ticketing and payment arrangements, as well as driver training, has resulted in over 95% of passengers being satisfied with the service.

Apart from making payment easier for users and presenting a more modern image, smartcards can substantially speed up boarding times at stops, which will reduce journey times overall. A fully integrated system could include other transport services such as ferries, bridge tolls and local rail.

Fares can be confusing and off-putting, especially for new users, and information on fares is not widely available. Ticketing presents problems for users and operators, and substantial efficiency savings can be achieved by introducing new payment systems. While sustaining revenue is important for operators, development of new ticketing and fare arrangements is fundamental to growth and can improve revenue streams for all operators.

An additional benefit resulting from our proposals will be the provision of information about our users, which will be almost unique in transport terms by providing better data and evidence on public transport journeys to:

- Support concessionary fares appeals processes (including for appeals, in a more transparent and open way removing disputes about the metrics)
- Allow operators to issue commercial tickets on smart cards
- Facilitate tactical deployment of marketing and smarter choice initiatives
- Encourage better identification and design of other public transport schemes.

The delivery of a smart card will support the government commitment for "*improving end-to-end journeys by enabling most public transport journeys to be undertaken with a smart ticket by December 2014*", as stated in the current local transport White Paper: Creating Growth, Cutting Carbon. In addition, the proposals support the recent government announcement of £45m of investment in smart ticketing on rail in the South East.

The performance of the smart card scheme against our local objectives is mapped in the table below:

Local Objective	How the Smart Card Supports the Local Objective
Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity	• A multi-operator smart card will improve employment horizons by making interchange between different bus operators and modes easier • Widen the workforce and skills base available to employers and so improve productivity
Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion	• Patronage growth on public transport that has occurred elsewhere in the UK, where smart cards have been introduced, is expected to be replicated in South Hampshire. In combination with appropriate marketing we aim to encourage the large number of short car trips on to public transport, so freeing up highway capacity and reducing congestion on those key strategic movements around our international gateways and economic centres
Improve sustainable access linking people to jobs and key facilities in our cities and towns	• The smart card is seen as the single most important driver for delivering significant patronage growth on public transport in South Hampshire • An interoperable smart card will improve sustainable access to jobs through making multi operator and multi modal trips easier • The smart card is area wide, so improves access for all
Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres	• The mode shift from cars to public transport that is expected to be delivered will reduce highway vehicle km's and reduce carbon and wider emissions
Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres	• The smart card will be area wide and so will improve public transport travel for all. • Opens up particular opportunities to target job seekers with travel incentives
Improve levels of physical activity, health and wellbeing through increased active travel	• Inevitably, if people are using public transport, they will walk or cycle from origin/ destination to access public transport. As such, increased patronage may increase levels of physical activity

Performance against Barriers

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28

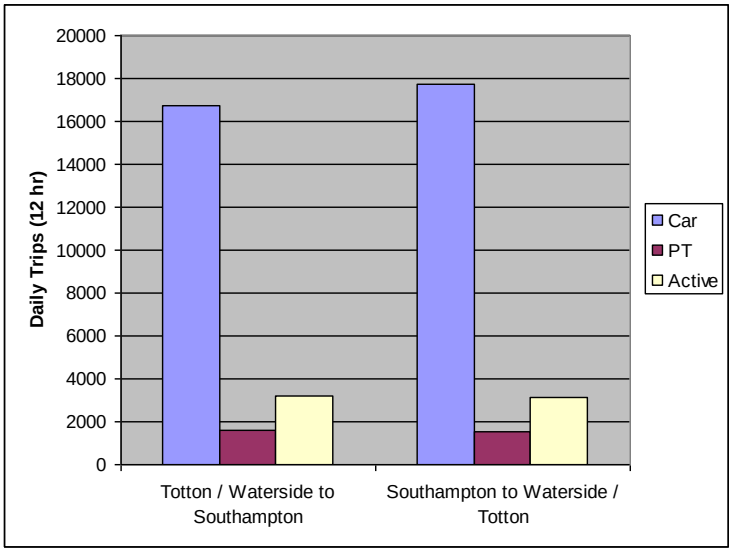
The smart ticketing scheme supports all six of the local objectives and facilitates progress against 19 barriers.

2.8.3 Detailed Description and Rationale of Interventions along each of the Nine Corridors

This section presents each of the nine corridors (as presented in map 2.15), starting in the west with Corridor 1 – Hythe to Southampton City Centre, and finishing with Corridor 9 – Havant to Portsmouth City Centre. Each corridor description includes the following:

- A short description of the corridor
- A description of the interventions
- A rationale for the proposals
- A map showing the key locations / issues along each corridor
- A map showing the location of interventions proposes for each corridor

A spatial overview of the location of the physical interventions along the corridors is shown in *map 2.18*.

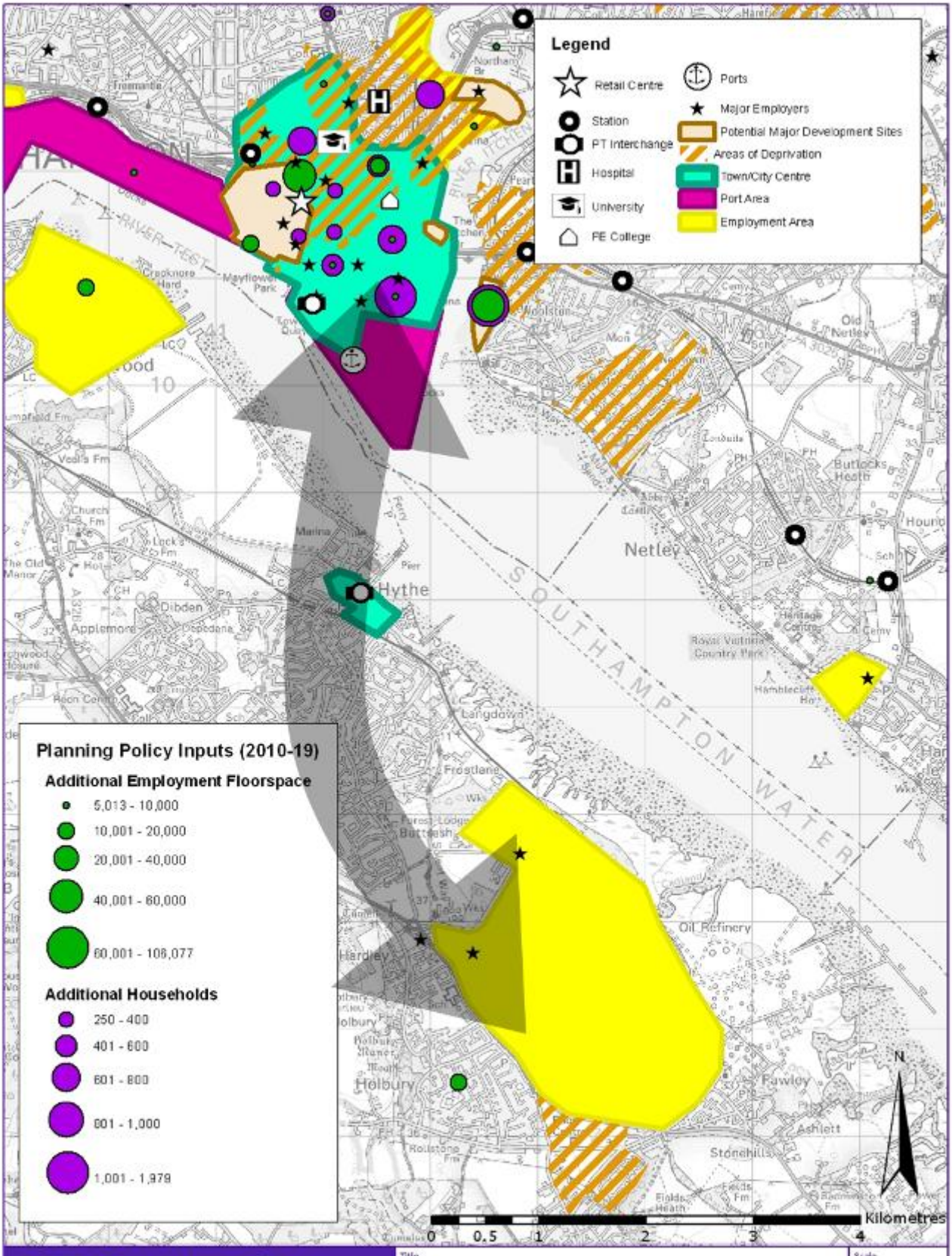
Corridor 1:	Hythe to Southampton
Description	This corridor connects Hythe in the Waterside area with Town Quay in Southampton City Centre, via the Hythe passenger ferry. The ferry docks in Hythe at the Pier, adjacent to a bus interchange. The Blue Star 9 bus service (which runs the length of the Waterside area) calls at the ferry interchange, therefore increasing the reach of the ferry service. In Southampton, the ferry service docks at Town Quay, which is centrally located, close to employment, retail and leisure. A number of bus services interchange at Town Quay, providing onward transport to other parts of Southampton. The free CityLink bus service operates every 15 minutes between Southampton Central Station and Town Quay via the regionally important West Quay shopping centre, with an approximate journey time of 10 minutes. The Hythe Ferry operates a 1/2 hourly service each day. The one-way trip time is around 12 minutes. The 2010-11 annual patronage on the service was 330,957. 6,044 two-way trips are made each day in the AM peak between the Waterside area and Southampton. The chart below shows the daily (12 hour) trips between Southampton and the Waterside area. A significant proportion of these are undertaken by car (78%). These trips place a significant loading on to the radial route into Southampton from the West (A35 / A3024) and the A326, causing congestion and delay to important economic movements to the ExxonMobil refinery in Fawley, the Port of Southampton and Southampton City Centre. There is a need to reduce these short distance vehicular trips to strengthen the role of these locally and nationally important economic functions.  The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Southampton 26,138 AM peak internal trips take place each, whilst the figure for the Waterside area is 10,509. Our MOSAIC analysis has shown that the Hythe area, in particular, has a significant number of residents who are likely to respond positively to our proposals.

Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	The focus for interventions is centred around the **Hythe ferry interchange**, which serves as a significant hub for onward public transport linkages, jobs, retail and services in Southampton via a half hourly privately operated ferry service. The proposals consist of an **enhanced waiting environment**, including a revamped ticket office and waiting facilities, representing a substantial improvement on the existing amenities. A **rail departures information screen** at the interchange will provide the latest updates for onward trains from Southampton Central. This will assist passengers in realising a seamless journey between modes of sustainable transport, and serves to underline the wider accessibility afforded by Hythe Interchange. Interchange improvements will also include a **replacement bus shelter, cycle parking facilities** and an **improved streetscene** around the hub, building on previous schemes that have made improvements to the quality of the footway. Information will be improved and promoted as part of the Hythe Ferry Travel Plan. The area-wide introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs is key to building confidence in making more journeys on foot and to improving the interchange experience and onward connections. Alongside this will be the delivery of a Personal Journey Planning exercise focuses on providing information and support for residents in the local area. **Real Time Information** (RTI) screens will be introduced at the Ferry interchange and at key bus stops within the wider Hythe corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. The major employer at Exxon Mobil Oil Refinery Terminal will also design and implement a Workplace Travel Plan.

Rationale	Hythe Interchange is a key hub for sustainable transport connections between the corridors hinterland and the principal focus of economic activity in the region – Southampton City centre. As Hythe has no rail connection, and the highway network is limited to an indirect route around the estuary, the half hourly Hythe ferry service to Southampton forms a critical link to jobs, commerce and services. The highway route around and over the River Test uses up valuable highway space on a key access route to the Port of Southampton and Southampton City Centre. Improved waiting facilities for ferry and bus passengers will enhance the quality of the user experience, and promote the ongoing role of this privately operated service. A key aim of the proposals is to deliver better integration with the town centre, and to revitalise the local economy and quality of place. The introduction of coherent legible cities pedestrian signage and additional cycle parking capacity would better support sustainable travel. Comprehensive Real Time Information and a live rail departures screen for Southampton Central trains delivers an improved waiting experience for passengers, as well as improved travel information helps to simplify public transport use and helping to improve user perception of public transport provision. Reducing private car commuting to the ExxonMobil site will also benefit the area by reducing traffic congestion in the peak periods.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH
Dec 2011

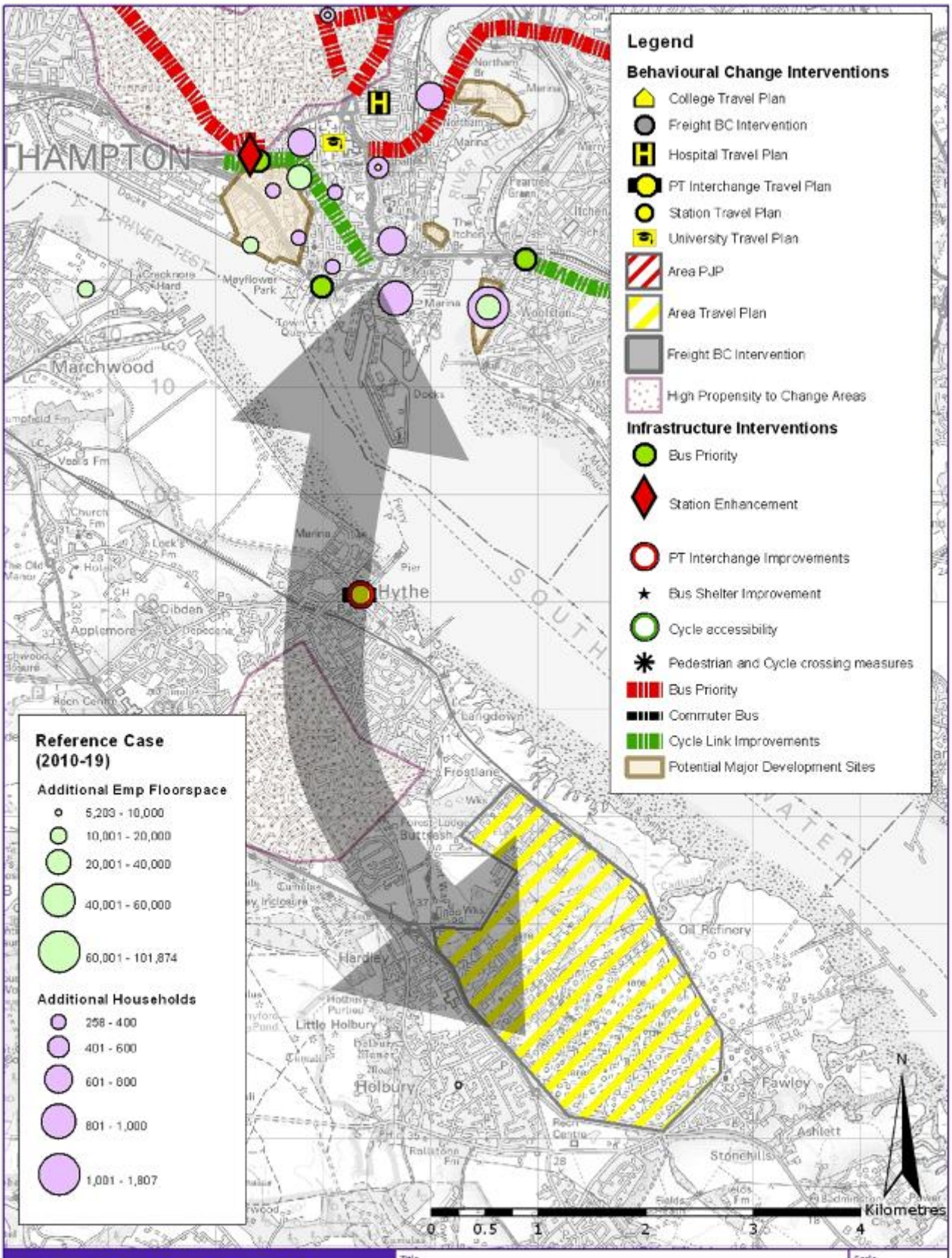
Title: C1 - Hythe to Southampton City Centre

Scale: 1:45,602 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Nov 2011

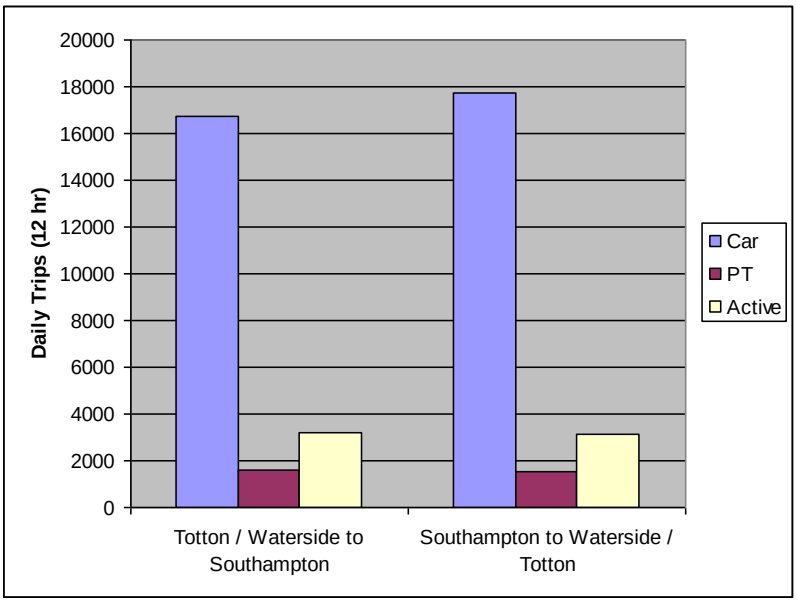
Title: C1 - Hythe to Southampton City Centre with interventions

Scale: 1:45,567 at A3

Project No.: C3A712

Figure:

mvaconsultancy

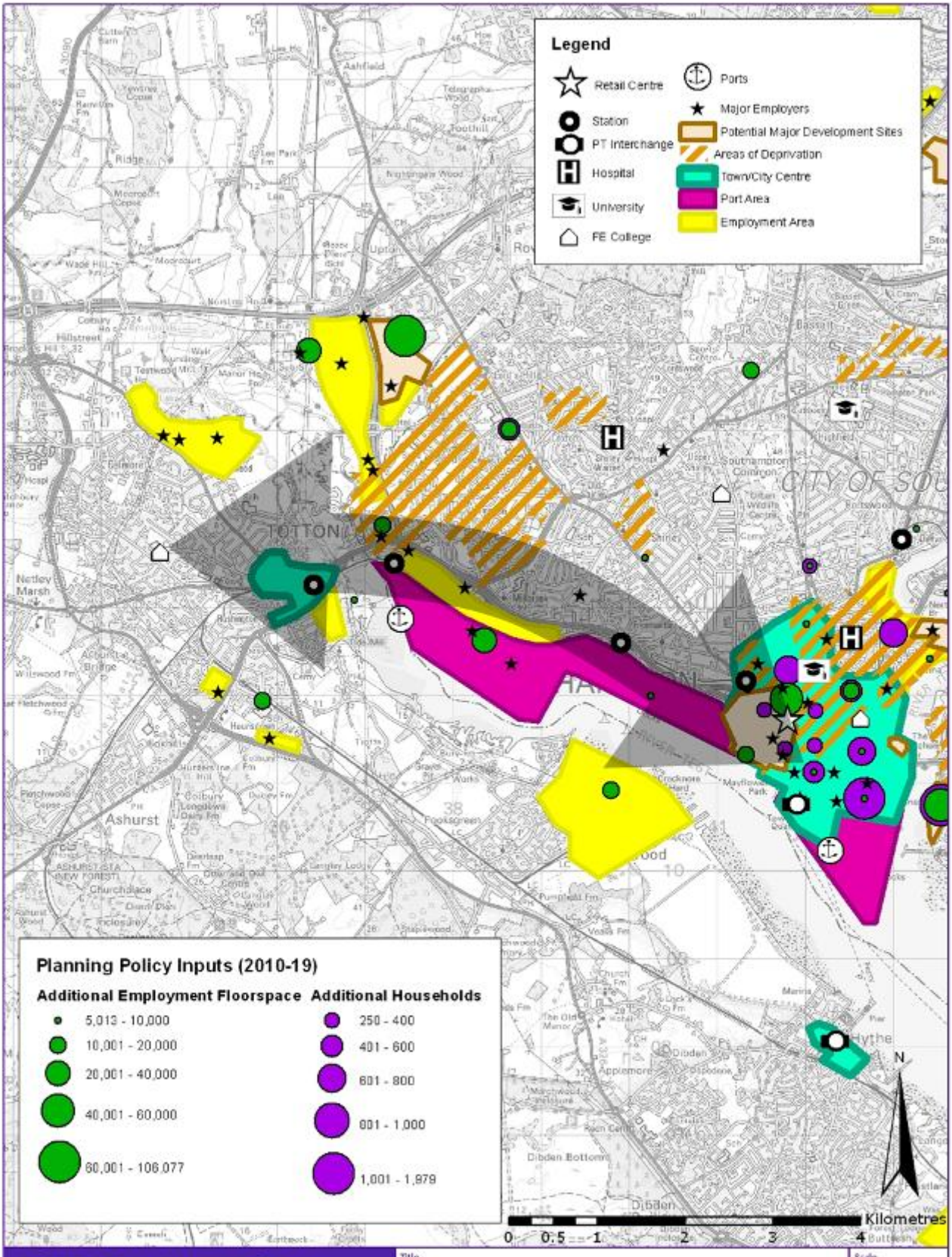
Corridor 2:	Totton to Southampton City Centre
Description	This corridor connects the town of Totton with Southampton City Centre. The corridor is served by a number of Blue Star Buses (services 6, 8, 9, 10, 11, 12 and the X7) providing a regular frequency service between the two settlements. Totton is very much a provider of labour to Southampton. 6,044 two-way trips are made each day in the AM peak between the Totton / Waterside area and Southampton. The chart below shows the daily (12 hour) trips between Southampton and the Totton / Waterside area. A significant proportion of these are undertaken by car (78%). These trips place a significant loading on to the radial route into Southampton from the West (A35 / A3024), causing congestion and delay to important economic movements to the Port of Southampton and Southampton City Centre. There is a need to reduce these short distance vehicular trips to strengthen the role of these locally and nationally important economic functions. The Redbridge and Millbrook Road Air Quality Management Areas (AQMA) are two of Southampton's AQMA's which exceed healthy limits. They also exceed the national limits for nitrogen dioxide by the greatest margin. Mode shift along this corridor will not only combat congestion but also contribute towards achieving the required 57% emissions reductions needed in these areas. There is also an AQMA in Totton town centre.  The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Southampton 26,138 AM peak internal trips take place each, whilst the figure for the Totton / Waterside area is 10,509. A rail station is located along the corridor at Totton, providing connections to Southampton and London and to Salisbury in the west. Our MOSAIC analysis has shown that the Totton area has a significant number of residents who are likely to respond positively to our proposals.

Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	A flagship intervention in the corridor is the package of schemes which comprise the Southampton Central Station Quarter **interchange and public realm improvements**. This **includes increased capacity for bus interchange**, with **improved waiting facilities and better signing** to/from the station. **Streetscene improvements** to adjacent roads will deliver an improved pedestrian/cyclist environment, whilst providing surrounds more befitting for a major gateway into the City. Another significant intervention in this corridor is the introduction of a **direct and continuous cycle route** emanating from both sides of Southampton Central linking into residential areas in Shirley to the Northwest and to Woolston in the East (included in Corridor 6). To the East the route links with the main hubs for employment and activity in the city centre, and beyond to the other side of the River Itchen – nearly 7km of continuous cycle facilities; including 4km of off-road routes. At the Western end of the corridor, proposals include improved pedestrian access on the north and south sides of Totton station, with new bus stops and **enhanced facilities for bus passengers**. **Public realm improvements** emphasise the station frontage and its prominence on the main road, including access for all measures to ensure DDA compliance. Proposed improvements for the interchange also include secure cycle parking, enhanced rail side waiting facilities, and travel and way-finding information. Access will be improved by the introduction of **toucan crossing**, and a section of more direct **off-road cycle lane** to bypass a heavily trafficked roundabout. The area-wide introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs is key to building confidence in making more journeys on foot and to improving the interchange experience and onward connections. This works in tandem with proposals for new **Interchange layout signing** at Southampton Central. **Real Time Information** (RTI) screens will be introduced at key interchanges and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided

	by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. To support the physical interventions, there will be a programme of **Personal Journey Planning** along the corridor to provide residents with information and advice on the range of sustainable travel options available to them. **Station and College Travel Plans i**n Totton will also help to reduce car based travel, especially in the peak periods
Rationale	These interventions focus on the principal mainline railway stations at either end of the corridor, and seek to deliver considerable improvements to access by sustainable modes, in conjunction with efforts to enhance the public realm and foster a sense of place: to better fulfil their respective roles as gateways to the local economic centres and to the wide public transport network. A key aim of the proposals is to deliver improved connections to the railway stations and town centres, and to revitalise the local economy and quality of place. Cycle links comprise an important component of the corridor package, linking key attractors throughout the area. The introduction of coherent legible cities pedestrian signage and additional cycle parking capacity would better support sustainable travel and support the awareness of the travel choices available through a Personal Journey Planning exercise. Comprehensive Real Time Information delivers an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH
Dec 2011

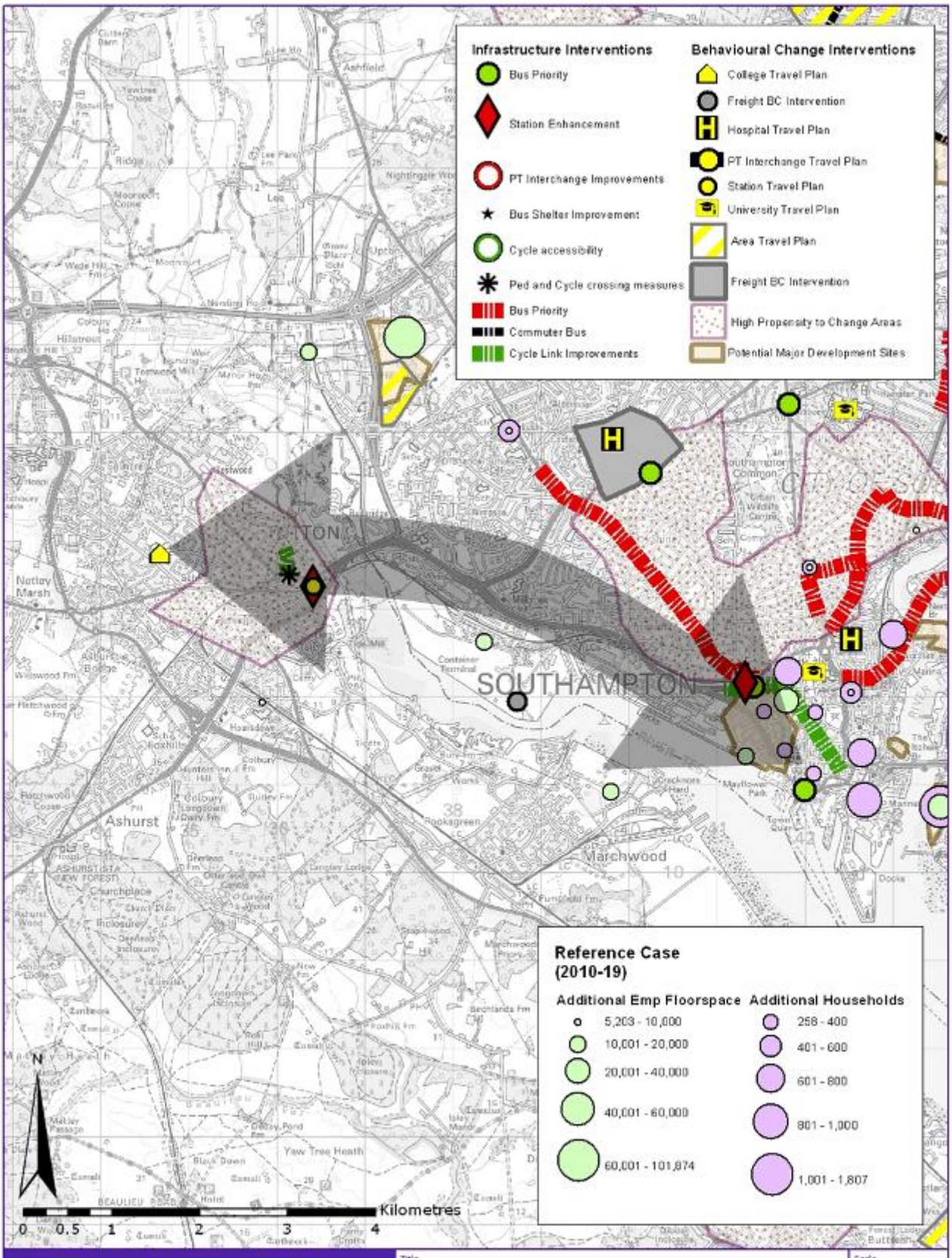
Title: C2 - Totton to Southampton City Centre

Scale: 1:55,603 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Dec 2011

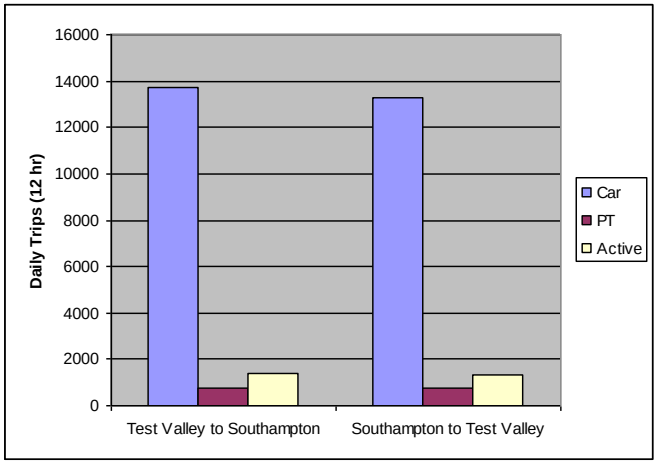
Title
C2 - Toton to Southampton City Centre with interventions

Scale
1:55,603 at A3

Project No.
C3A712

Figure

mvaconsultancy

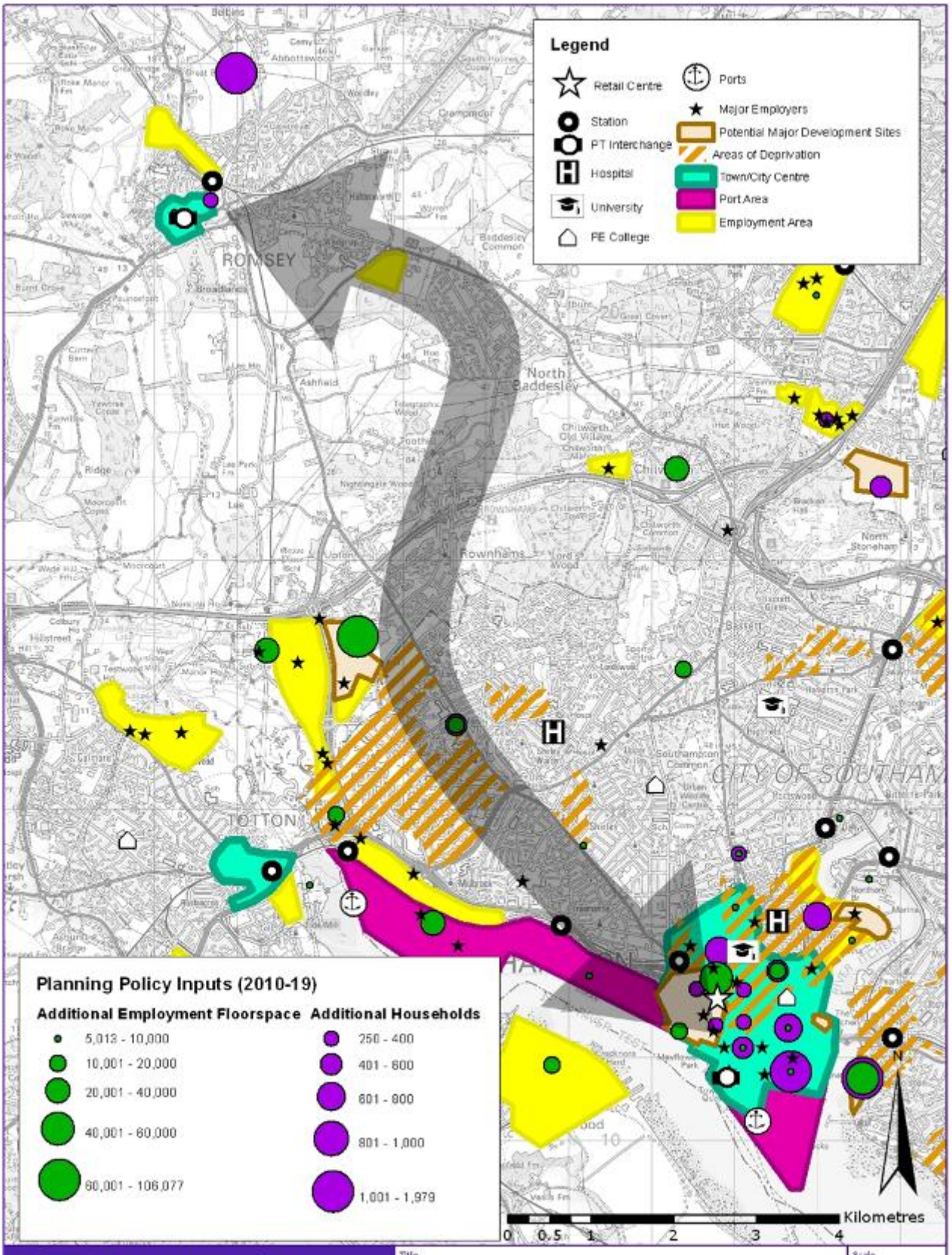
Corridor 3:	Romsey to Southampton City Centre
Description	This corridor connects the town of Romsey with Southampton City Centre. The corridor is served by Blue Star Buses bus service 4, providing a half hourly service frequency service between the two settlements in the peaks and hourly in between. Romsey is very much a provider of labour to Southampton. 3,655 Two-way trips are made each day in the AM peak between Test Valley / Romsey area and Southampton. The chart below shows the daily (12 hour) trips between Southampton and Test Valley. A significant proportion of these are undertaken by car (86%). These trips place a loading on to a key radial route into Southampton from the West (M271), causing congestion and delay to important economic movements to the Port of Southampton and Southampton City Centre and to large employers located along this corridor (e.g. Ordnance Survey Head Quarters). There is a need to reduce these short distance vehicular trips to strengthen the role of these locally and nationally important economic functions.  This corridor also includes Shirley – a District shopping centre in Southampton – which is classified as a town centre in it's own right, due to its size and retail presence. The Shirley Road Corridor is a key bus corridor into Southampton. Our MOSAIC analysis has shown that the Romsey area has a significant number of residents who are likely to respond positively to our proposals.
Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel

Interventions	Proposed interventions at Romsey Railway station will build on recent schemes that have sought to improve accessibility to the station. The interventions include a new **secure cycle compound** and improved pedestrian access through the introduction of a resurfaced and lit path which completes the link **with the recently improved North-South running canal tow path** to the West. The streetscene and enforcement of parking restrictions will be improved through resurfacing the Station forecourt. **Bus priority measures** will be introduced at junctions and links along the Shirley Corridor, City Centre Area, and Winchester Road. These will include hardware/software changes to traffic signal controllers and installation of bus detection points on junction approaches to provide priority to buses through an urban traffic control system. The measures will also include relocation of stops, kerb-line alterations and bus stop improvements to ensure that they are DDA compliant. The area-wide introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs is key to building confidence in making more journeys on foot and to improving the interchange experience and onward connections. This works in tandem with proposals for new **Interchange layout signing** at Romsey Bus Station. **Real Time Information** (RTI) screens will be introduced at Romsey Rail Station and other key centres in the corridor, including the Mayflower Theatre, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. Delivering **travel plans** at Adanac Business Park and for the General Hospital are key aspects of the behaviour change programme targeting these large trip attractors which contribute to the high levels of peak car based commuting in the local area. A **Personal Journey Planning** exercise will help make local people aware of the range of travel choices available to them locally. In addition, a **cycle home delivery project** has been proposed for North Shirley which can significantly reduce short local car trips whilst supporting a new local sustainable travel business opportunity.

Rationale	The Romsey Road/Shirley Road corridor that connects Romsey in the Northwest to Southampton is a key arterial route into the city – and features strong bus passenger usage, particularly in Shirley. A series of bus priority schemes along the route will deliver significant journey time savings and improved journey time reliability. These enhancements are further complimented by the introduction of comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. Romsey Rail Station has benefited from a number of accessibility improvements in recent years, but the constraints of the site continue to pose obstacles to improved access by sustainable modes. Improved pedestrian and cycle access and cycle parking will expand route options to the site. The introduction of coherent Legible Cities pedestrian signage will further support a shift towards sustainable travel. Work at both Adanac Business Park and the General Hospital will mean car commuting is addressed and fewer peak period car travel observed in the future.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH
Dec 2011

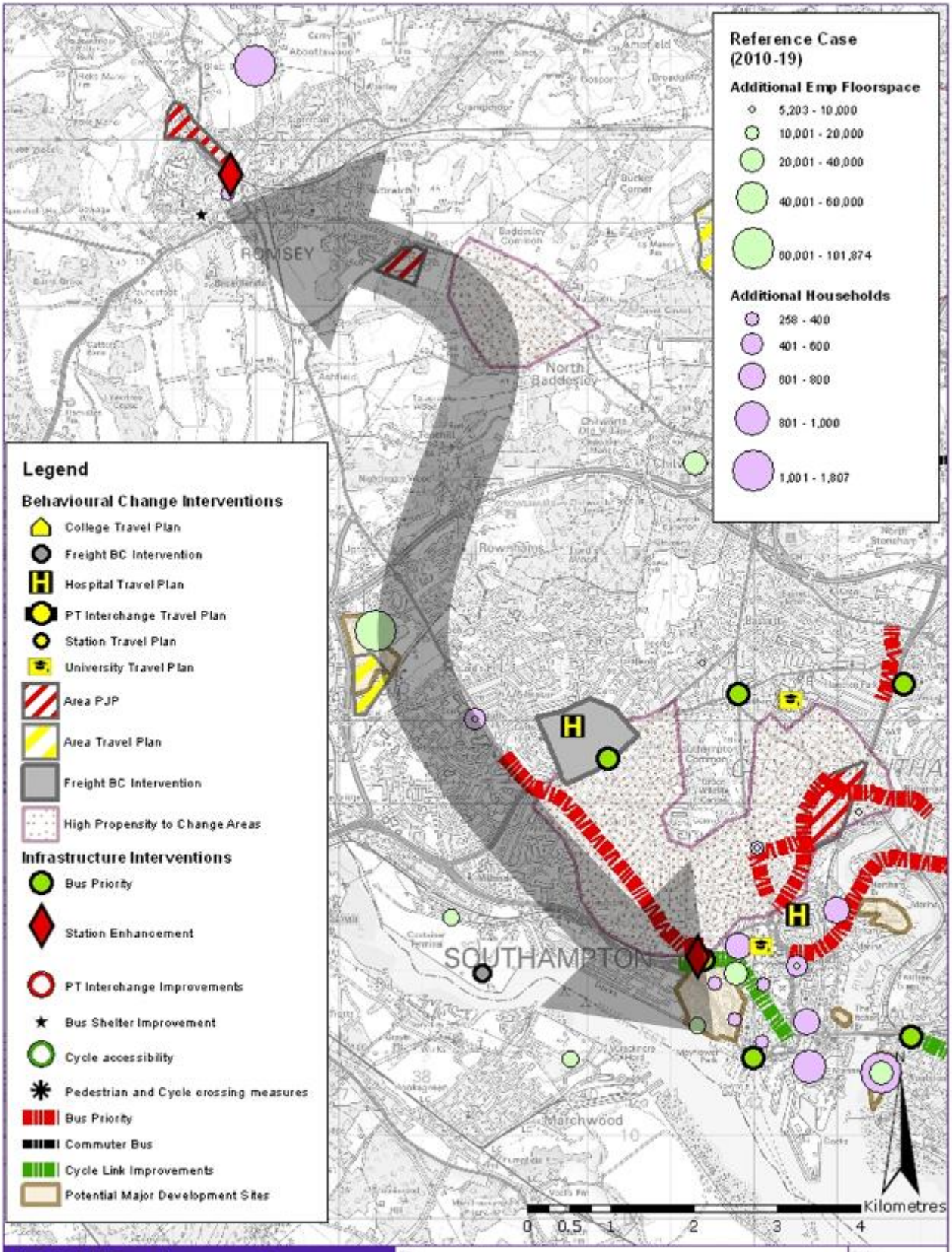
Title: C3 - Romsey to Southampton City Centre

Scale: 1:58,934 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

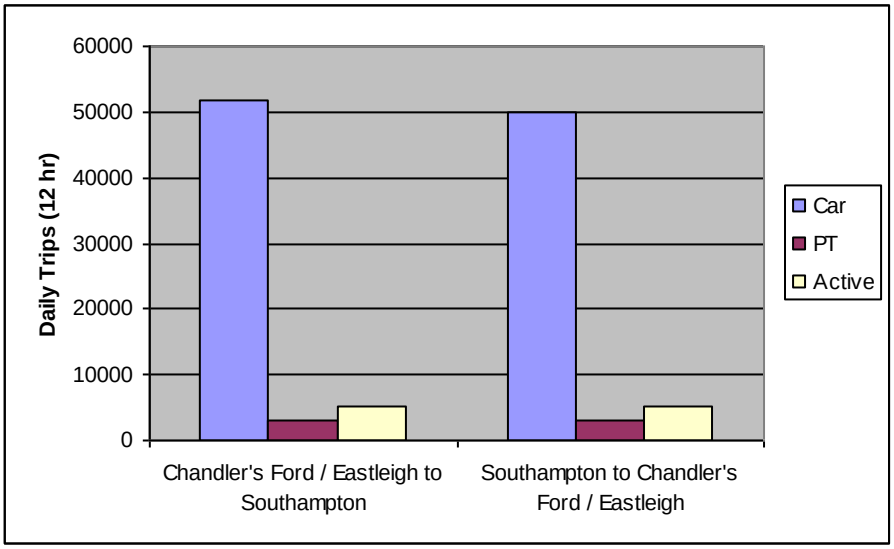
Prepared for TfSH
Nov 2011

C3 - Romsey to Southampton City Centre with interventions

1:58,887 at A3

C3A712

mvaconsultancy

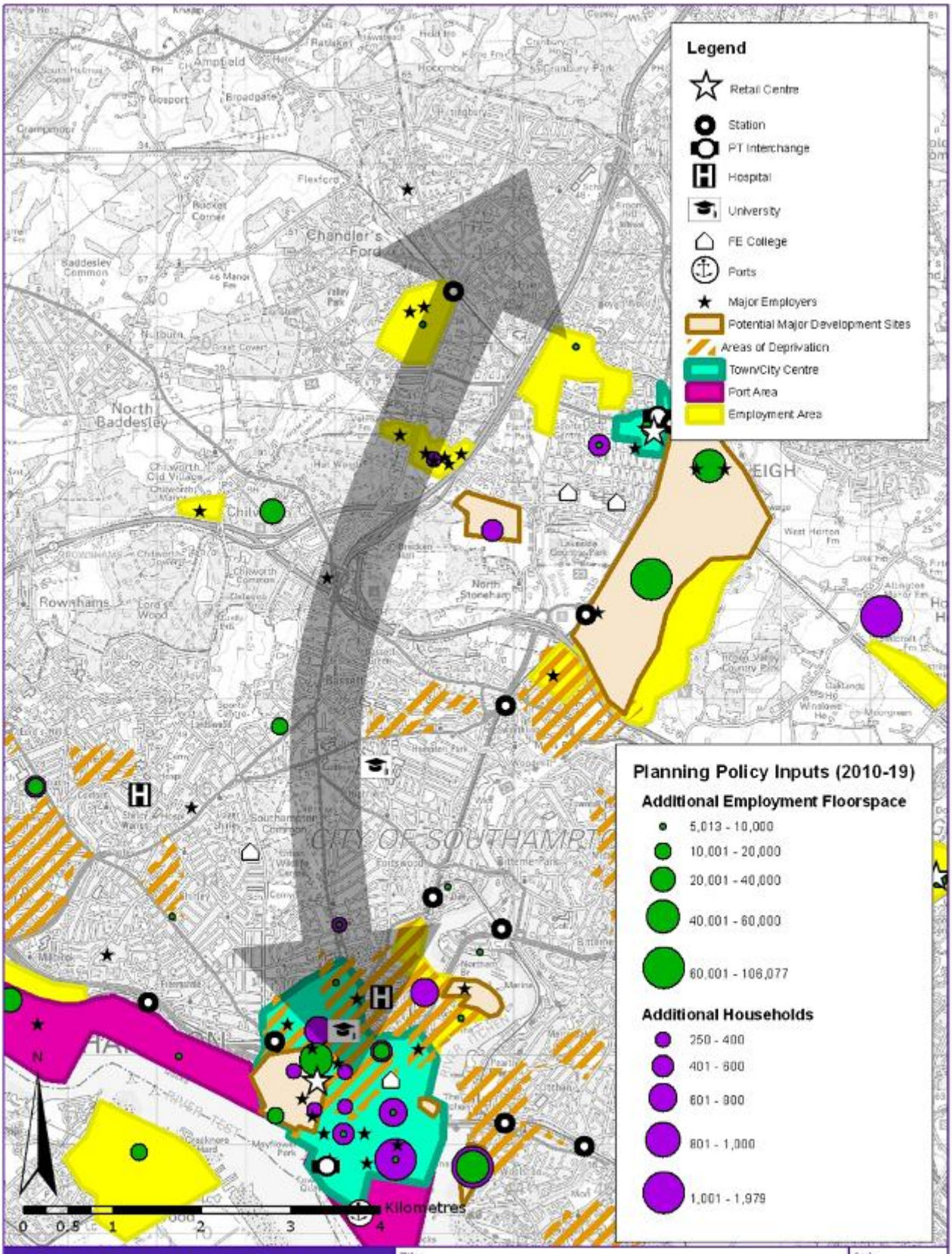
Corridor 4	Chandler's Ford to Southampton City Centre
Description	This corridor connects the town of Chandler's Ford with Southampton City Centre. The corridor is served by Blue Star Buses bus service 1, providing a 20 minute service frequency service between the two settlements throughout the day. This service forms part of a well used route between Winchester (outside of TfSH area) and Southampton. Flows of people on this route are strong in both directions (Southampton to Chandler's Ford / Winchester and vice versa). In particular several students have a Chandler's Ford origin for journey to colleges and Higher Education establishment in the two cities (Winchester and Southampton). A rail station is located along the corridor at Chandler's Ford, providing connections to Southampton and London (via Eastleigh) and to Salisbury in the west. Chandler's Ford has developed a significant residential population in the latter decades of the 20th Century with several large residential developments being built. In addition, there is a significant employment presence, with the Head Quarters of B&Q and Draper Tools located along the corridor. Hampshire Corporate Park (Aviva, RBS, Coutts, and Nat West) and Southampton Science park are also located in Chandler's Ford. 12,905 Two-way trips are made each day in the AM peak between the Chandler's Ford / Eastleigh area and Southampton. The chart below shows the daily (12 hour) trips between Southampton and Chandler's Ford / Eastleigh. A significant proportion of these are undertaken by car (86%). These trips place a significant loading on the M3 / M27, causing congestion and delay to important economic movements to the Port of Southampton, Southampton Airport and Southampton City Centre, as well as strategic movements through the TfSH area. There is a need to reduce short distance vehicular trips to reduce congestion and improve productivity and competitiveness.  The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Southampton 26,138 AM peak internal trips take place each, whilst the figure for the Chandler's Ford Eastleigh area is 9,351.

	Our MOSAIC analysis has shown that the Chandler's Ford area has a significant number of residents who are likely to respond positively to our proposals.
Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	A key intervention for the corridor involves the **establishment of a privately funded commuter shuttle bus** to service the concentration of industrial and office premises in Chandlers Ford. This will provide peak time linkages to Southampton Airport Parkway Station and lunchtime trips to Eastleigh town centre, making travelling into the area by non-car modes a far more appealing proposition. The service will be funded by private sector companies and replaces and expands upon a series of smaller scale shuttle services operated by individual companies – enabling higher frequency services whilst delivering cost and efficiency savings for businesses. The LSTF grant would provide the initial pump priming required to help cover start up costs, which include the co-ordination of routing arrangements, fleet procurement and management of contractual and funding arrangements. The scheme would be supported with a co-ordinating role from the **Area Wide Travel Plan forum**. In addition an **area-wide Travel Plan** will also be delivered in Chandler's Ford. Bus services would benefit from **Bus priority measures** at a key junction in Chandlers Ford and at junctions and links around Southampton University. These will include hardware/software changes to traffic signal controllers and installation of bus detection points on junction approaches to provide priority to buses through an urban traffic control system. The measures will also include relocation of stops and kerb-line alterations. There are proposals to **improve pedestrian and cycle crossing facilities** at a major junction in Chandlers Ford, which contributes to severance along the corridor for sustainable modes of travel, particularly to the nearby rail station. Along with crossing improvements, the area-wide introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs is key to building confidence in making more journeys on foot and to improving the interchange experience and onward connections.

	Real Time Information (RTI) screens will be introduced at Chandlers Ford Rail Station and other key centres in the corridor, including Southampton University and Southampton Solent University, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. Further **travel plan** measures will be introduced at both the **University of Southampton and Southampton Solent University** strengthening their role as sustainable travel destinations and building upon recent successes.
Rationale	Chandlers Ford is a relatively affluent suburban area, and does not constitute an environment naturally conducive to high levels of bus usage, while its railway station is on a branch line and so provides more limited access to the rail network. The area also contains large concentrations of business parks and industrial estates, and so shuttle buses can play an important role in providing a rapid and direct connection to the regionally significant transport hub at Southampton Airport and also to Eastleigh town centre. Bus priority schemes in Chandlers Ford will compliment the shuttle bus strategy, while priority measures around the Universities in Southampton (and associated Travel Plans) will deliver significant journey time savings and improved journey time reliability for the already successful Uni Link services. These enhancements also benefit from the introduction of comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. The introduction of coherent legible cities pedestrian signage would further support a shift towards sustainable travel.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH

Dec 2011

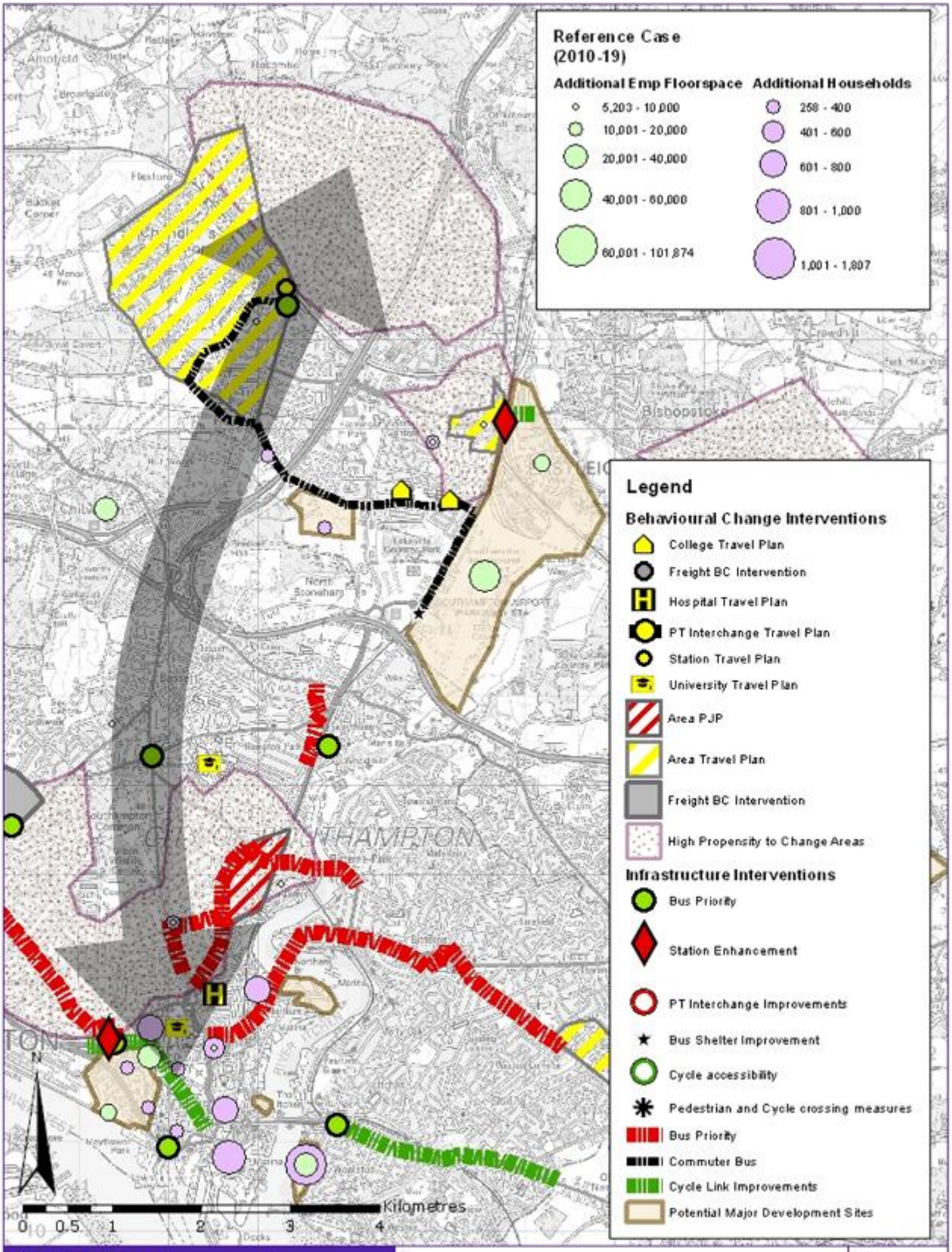
Title: C4 - Chandler's Ford to Southampton City Centre

Scale: 1:54,855 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

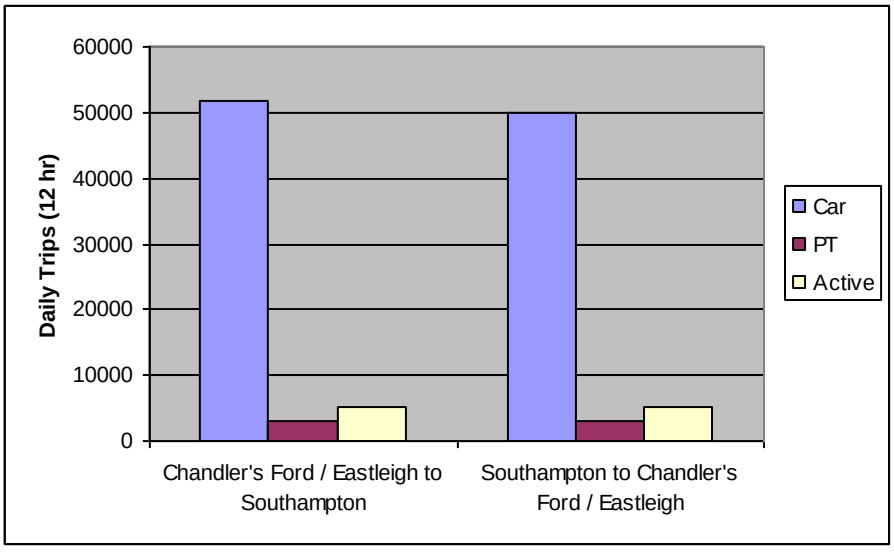
Prepared for TfSH
Nov 2011

C4 - Chandler's Ford to Southampton City Centre with interventions

1:54,812 at A3

C3A712

mvaconsultancy

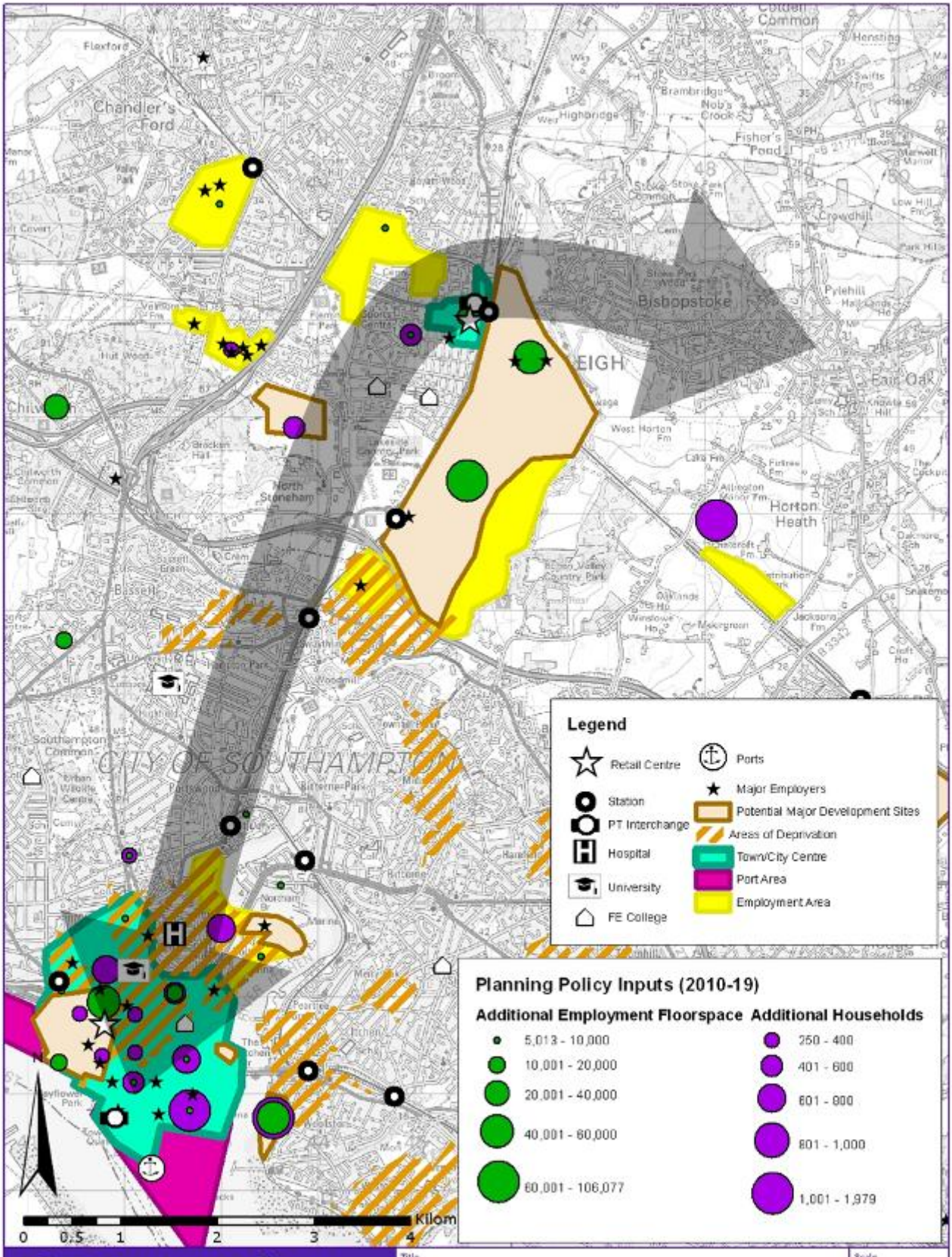
Corridor 5	Eastleigh to Southampton City Centre
Description	This corridor connects the town of Eastleigh with Southampton City Centre. The corridor is served by Blue Star Buses bus service 2 and N2, providing a 15 minute service frequency between the two settlements in the peaks and 20 minutes in between. This is a key commuting corridor and connects two international gateways (Southampton Airport and the Port of Southampton). A number of rail stations are also located along the corridor (Eastleigh, Southampton Airport Parkway, Swaythling, St. Denys and Southampton Central). The interchange at Southampton Airport Parkway station provides a particular opportunity for people to continue their travel from the airport by rail or bus into Southampton. This is especially pertinent to the rapidly growing cruise market. The University of Southampton and Southampton Solent University are both located on this corridor, providing a significant public transport market (32,583 students). 12,905 Two-way trips are made each day in the AM peak between the Eastleigh / Chandler's Ford and Southampton. The chart below shows the daily (12 hour) trips between Southampton and Eastleigh / Chandler's Ford. A significant proportion of these are undertaken by car (86%). These trips place a significant loading on the M3 / M27, causing congestion and delay to important economic movements to the Port of Southampton, Southampton Airport and Southampton City Centre, as well as strategic movements through the TfSH area. There is a need to reduce short distance vehicular trips to reduce congestion (especially at the heavily congested M27 junction 5 at the airport) and so improve productivity and competitiveness.  The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Southampton 26,138 AM peak internal trips take place each, whilst the figure for the Chandler's Ford Eastleigh area is 9,351. The corridor also has an AQMA, along Southampton Road in Eastleigh. Our MOSAIC analysis has shown that the Eastleigh area has a significant number of residents who are likely to respond positively to our proposals.

Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	One of the most substantial interventions on this corridor is the enhancement of the environment outside Eastleigh Rail Station, focussing on **urban realm improvements**, which build on its railway heritage and better enable it to serve as a gateway into the town. The redesign of the forecourt removes barriers to **pedestrian and cycling movements, and improves waiting facilities**. Improved signage will strengthen links between the rail station and the bus station. The introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs will also help to build confidence in making more journeys on foot, improve the interchange experience and onward connections. This will be supported by an **Area Travel Plan** covering Eastleigh Town Centre with specific Travel Plans for two large **colleges** – Eastleigh and Barton Peveril and the Royal South Hants Hospital. A **Personal Journey Planning** exercise will provide information and advice relating to sustainable travel options for local residents. The introduction of an **Off-road cycle Link** to Eastleigh Rail Station from Barton Park Industrial Estate provides a means of crossing a busy and constrained rail bridge, a current cause of severance from residential areas to the East. Southampton Airport Parkway **interchange improvements** include upgrading an inferior standard and poorly situated bus shelter, which in conjunction with improved signing from the station and airport will enhance the visibility of onward bus connections. **Bus priority measures** will be introduced at junctions and links along the busy north-south running Portswood Road corridor, Bevois Valley and St Deny's Road. These will include hardware/software changes to traffic signal controllers and installation of bus detection points on junction approaches to provide priority to buses through an urban traffic control system. The measures will also include relocation of stops and kerb-line alterations. **Real Time Information** (RTI) screens will be introduced at rail stations and other key centres in the corridor, including The Swan Centre in Eastleigh, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops.

	The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority.
Rationale	Interventions at Eastleigh Station serve to both enhance its presence and function within the town centre, whilst also improving accessibility to the town and rail connections for pedestrians and cyclists. The introduction of an off-road cycle route provides greatly improved access to an urban centre from an extensive and predominantly residential catchment to the east. This includes improved linkages between Eastleigh Rail Station and Barton Park Industrial Estate, where plans for a major new strategic employment site at Eastleigh River Side are centred. The improved accessibility, comfort and visibility of waiting areas for bus interchange at Southampton Airport Parkway Rail Station serves to promote multi-modal interchange and car free journeys to/from a major attractor of trips in the region. The Portswood Road corridor is a key north-south arterial route into the city with strong bus patronage. A series of bus priority schemes along the route will deliver significant journey time savings and improved journey time reliability. These enhancements are further complimented by the introduction of comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. The introduction of coherent legible cities pedestrian signage would further support a shift towards sustainable travel together with a range of behaviour change measures including workplace and personal travel planning.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH

Dec 2011

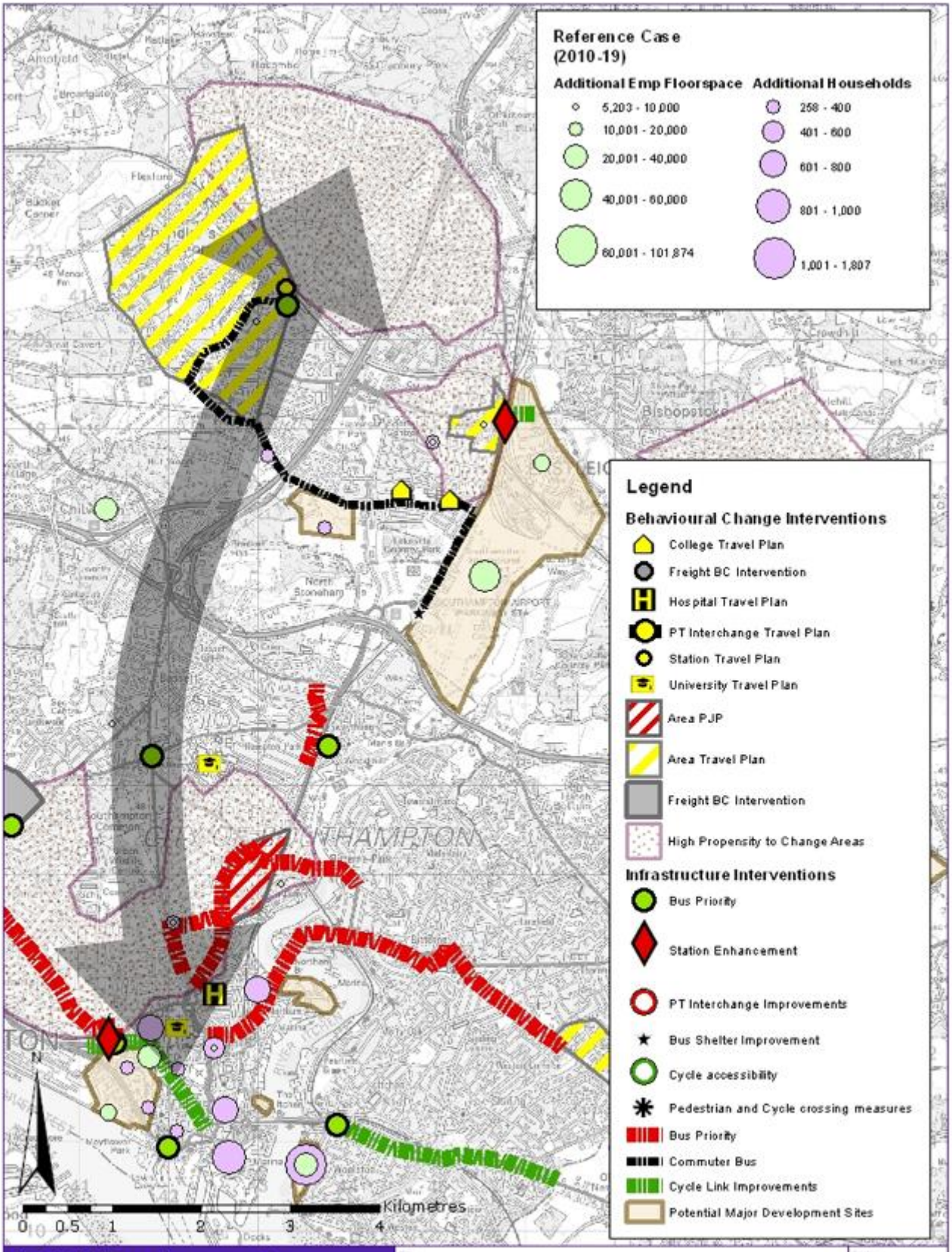
Title: C5 - Eastleigh to Southampton City Centre

Scale: 1:50,561 at A3

Project No: C3A712

Figure

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Nov 2011

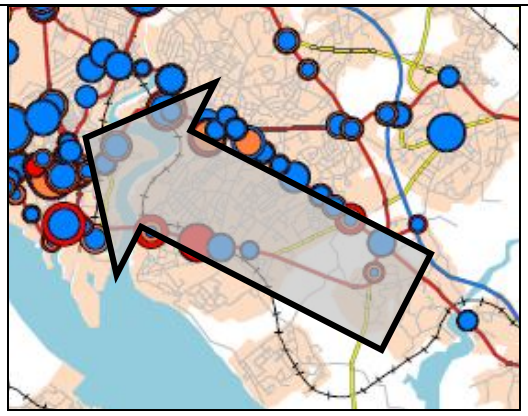
C4 - Chandler's Ford to Southampton City Centre with interventions

1:54,812 at A3

C3A712

mvaconsultancy

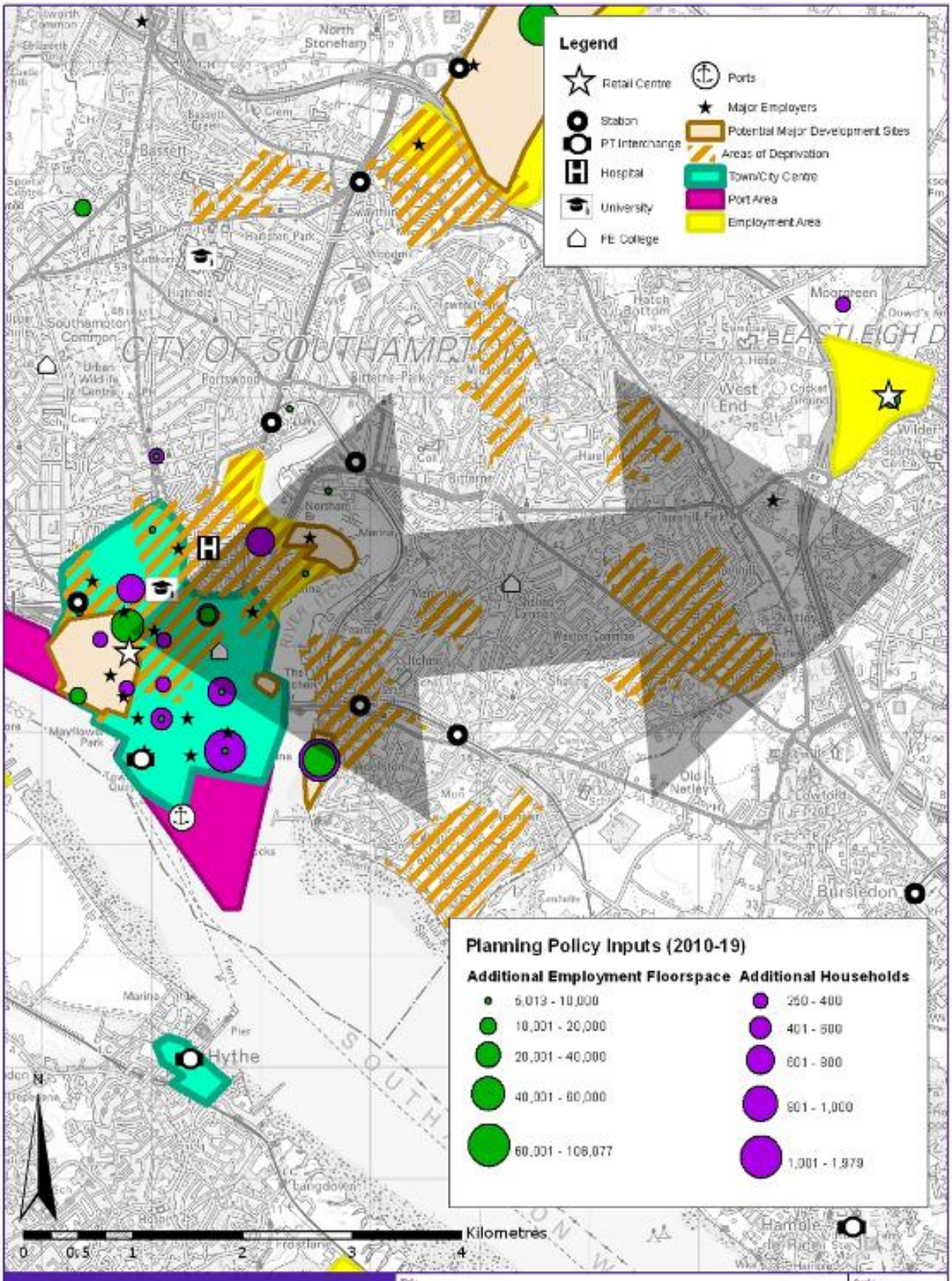
Corridor 6	Eastern Suburbs to Southampton City Centre
Description	This corridor connects the eastern suburbs (such as Bitterne, Thornhill, Weston and Woolston) within Southampton with the City Centre. In addition, if planned new housing development takes place in Hedge End (2,400 houses) improvements along this radial route will incentivise bus travel into Southampton City Centre. Thornhill is the most deprived area of Southampton and in the top 5% most deprived parts of England. The key MOSAIC segments are: • Segment 3: Low income older couples approaching retirement, living in low rise council housing • Segment 4: Childless, young, high rise council tenants with issues of social Isolation • Segment 5: Vulnerable young families or lone parents living on council housing estates Poor health and obesity are feature of these segments and there are high proportions of young people. Hinkler Parade – the District Centre in Thornhill – is undergoing a £16m regeneration scheme that includes 106 new homes with 30% meeting Southampton City Council's Family Homes policy, 5 new retail units and a community facility. With the closure of a large ship builder and in Woolston (Vosper Thorneycroft) the Woolston and Weston areas of Southampton were dealt a major blow to employment opportunities, in what is already one of the key deprivation areas in south Hampshire. The former Vosper Thorneycroft site is now known as the Centenary Quay development, and is being redeveloped to include over 1,600 homes, offices, a hotel, and create more than 1,000 jobs. Health levels are low and opportunities to increase active mode access to Southampton City Centre via the Itchen Bridge would help improve employment opportunities to this area. The corridor represents the key radial access route into Southampton City Centre from the east. With significant retail and employment destinations at either end of the route (Southampton and Hedge End), there are significant two-way movements along this corridor. The plot below shows a number of incidences of delays along this route (Blue Circles). There are forecast to increase by 2019 and 2026 (Orange and Red Circles respectively). Many of these trips are short private car trips, that could be made by bus or active modes.

	 Our MOSAIC analysis has shown that the eastern approach to Southampton has a number of groups who are already undertaking sustainable trips, as well as pockets who are identified as most likely to respond positively to our proposals.
Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	A core component of the physical interventions package for this corridor is the implementation of a **direct and continuous cycle route** linking Southampton City Centre with the predominantly residential areas east of Weston and Woolston. This, in combination with the other half of the route connecting the City centre to Southampton Central Rail Station (covered in Corridor 2), amounts to nearly 7km of continuous cycle facilities; including 4km of off-road route. This scheme will provide a significantly improved and expanded cycle network, and a more cyclist friendly means of crossing the substantial and well trafficked Itchen bridge, which currently presents a considerable barrier to east-west cycle movements. The introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs will help to build confidence in making more journeys on foot, improve the interchange experience and onward connections.

	A **Travel Plan** at East Point Centre will encourage more sustainable travel specifically in the peak periods. **Bus priority measures** are proposed at the Woolston centre junction and on Northam Road, which connects the residential Northeast hinterland of the City via the Northam Bridge over the Itchen. **Real Time Information** (RTI) screens will be introduced at rail stations and other key centres in the corridor, including St Mary's Stadium, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. **Personal Journey Planning** will be used to promote sustainable travel and provide residents with tailor made advice and information suitable for their specific travel needs.
Rationale	The corridor includes pockets of relatively acute deprivation, and encounters considerable severance as a consequence of the River Itchen and the limited number of crossing points between it and the City Centre. The provision of a direct and continuous cycle route between Southampton City Centre and Southampton Central Rail Station, out to the expanse of residential suburbs on the eastern banks of the River Itchen creates a more tangible means of accessing jobs, commerce and services in the City Centre by sustainable transport. East-west running bus routes suffer delays at the limited number of crossing points over the Itchen, and as such targeted bus priority schemes along the route will deliver significant journey time savings and improved journey time reliability. These enhancements are further complimented by the introduction of comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. The introduction of coherent legible cities pedestrian signage would further support a shift towards sustainable travel. Personal Journey Planning will assist residents with making the right choices regarding sustainable and affordable travel that meets their individual needs.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH

Dec 2011

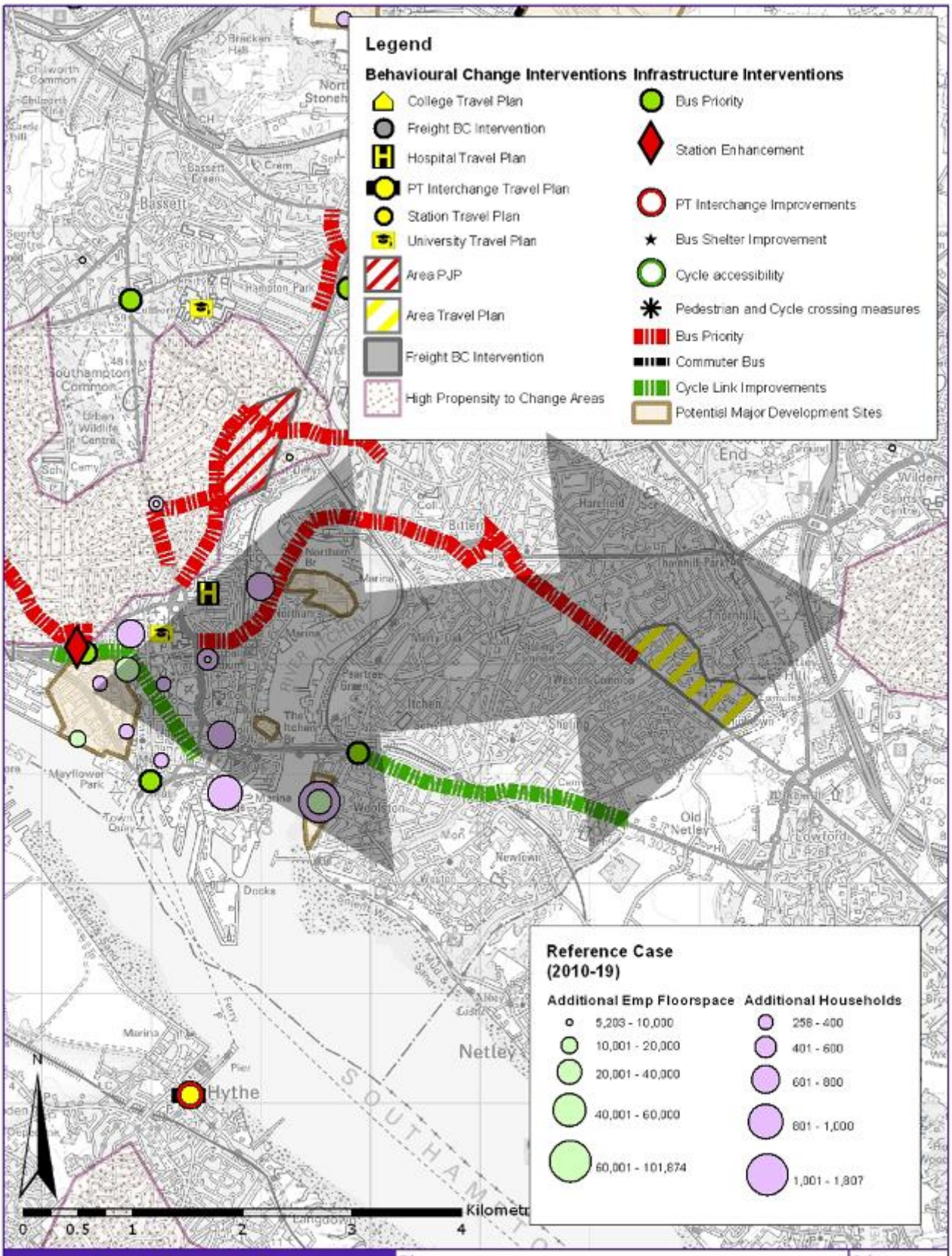
Title: C6 - Eastern Suburbs to Southampton City Centre

Scale: 1:44,670 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Nov 2011

Title
C6 - Eastern Suburbs to Southampton City Centre with interventions

Scale
1:44,670 at A3

Project No.
C3A712

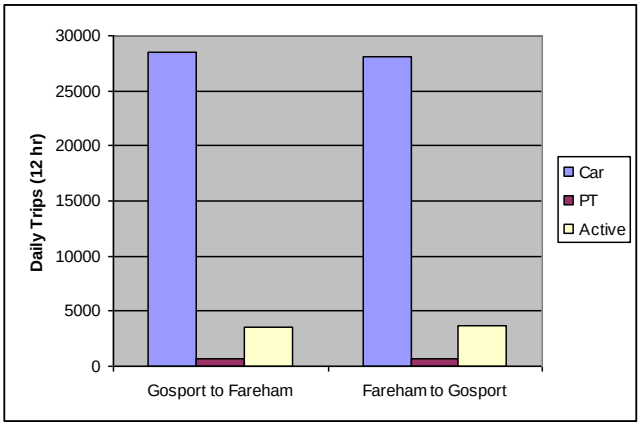
Figure

mvaconsultancy

Corridor 7	Gosport/Daedalus Enterprise Zone to Fareham
Description	This corridor connects the towns of Fareham and Gosport on the Gosport peninsula and also provides an important corridor connecting Fareham / Gosport with Portsmouth via the Gosport Ferry. As identified earlier in this Business Case, access to Gosport is via three key routes (A32, B3385 Newgate Lane and B3334 Gosport Road). Fareham has a rail station and a large bus interchange, although the two are some distance apart. Rail does not extend into Gosport. Gosport has a low quality bus station at the ferry interchange.  Gosport Ferry provides a key sustainable link between Gosport Town Centre and Portsmouth City Centre. Over 3.4m passengers journeys are made each year, on the service that operates 18.5 hours per day from 0530. The ferry makes 70,000 trips per annum across Portsmouth Harbour, with each journey taking approximately 5 minutes. The service also carriers over 450,000 cycling trips per annum, with an average of 9,400 daily foot passengers and 1,250 daily cycles. Each vessel can carry up to 300 passengers. Providing a maximum peak capacity of 2,400 passengers per hour. The daily adult fare is £2.70 return Hampshire County Council is currently delivering Phase 1a of Bus Rapid Transit connecting Fareham and Gosport, along a former railway track. The £20m scheme for BRT Phase 1 is the first phase of the proposed south east Hampshire BRT scheme. BRT Phase 1 (due to open in April 2012) includes high quality waiting facilities with: • real-time passenger information advising on the arrival times of the next buses • seating • lighting • closed-circuit TV for security, and • special features to ensure accessibility for all. The buses that travel on the BRT Phase 1 route will be subject to a special agreement between Hampshire County Council and South Hampshire Bus Operators' Association (SHBOA). The result will be a more efficient service using new, comfortable, low-emission buses that will raise the bus travel experience to a higher level. BRT Phase 1 is being delivered in two phases: • Phase 1A – Redlands Lane to Tichborne Way • Phase 1B – Tichborne Way to Military Road Using the new busway, buses will be able to avoid congested parts of the busy A32 so that passengers can benefit from reliable journey times and can plan their onward travel connections. There is an opportunity to maximise the benefits of this infrastructure through complimentary LSTF measures.

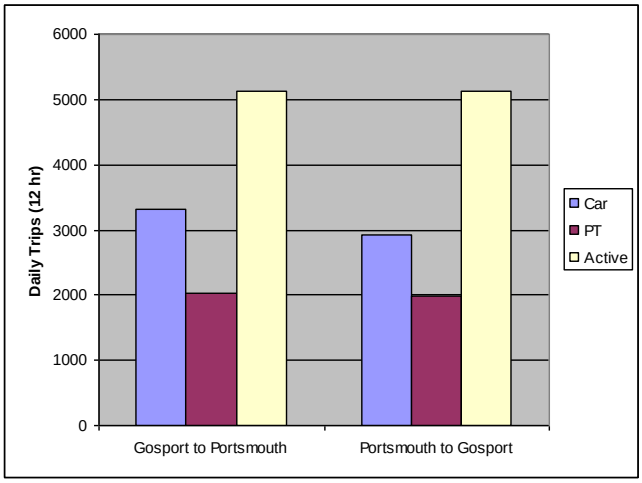
Out-commuting is high in Gosport, with 49% of residents employed outside of the Borough. 6,500 (36%) workers commute to Fareham and 5,100 (28%) to Portsmouth, from Gosport daily. The A32 and B3385 are congested throughout most parts of the day.

7,235 Two-way trips are made each day in the AM peak between Gosport and Fareham. The chart below shows the daily (12 hour) trips between Gosport and Fareham. A significant proportion of these are undertaken by car (87%). These trips place a significant loading on to the key routes between the two settlements outlined above, causing congestion and delay and reducing the attractiveness of Gosport as a place for new business to locate and for existing businesses to trade.



The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Gosport 7,524 AM peak internal trips take place each, whilst the figure for the Fareham is 7,761.

However, this does not tell the full story of trip flows through Fareham and Gosport. The graph below shows daily (12 hr) trips by mode between Gosport and Portsmouth. This shows a completely different spread of trips across modes, with public transport trips far higher (mainly ferry). Indeed, car trips account for just 30% of all trips.



Gosport has a high cycling rate as a mode to work. The 2001 Census revealed that 10.7% of Gosport residents cycle to work – way above the national average of 2.8%.

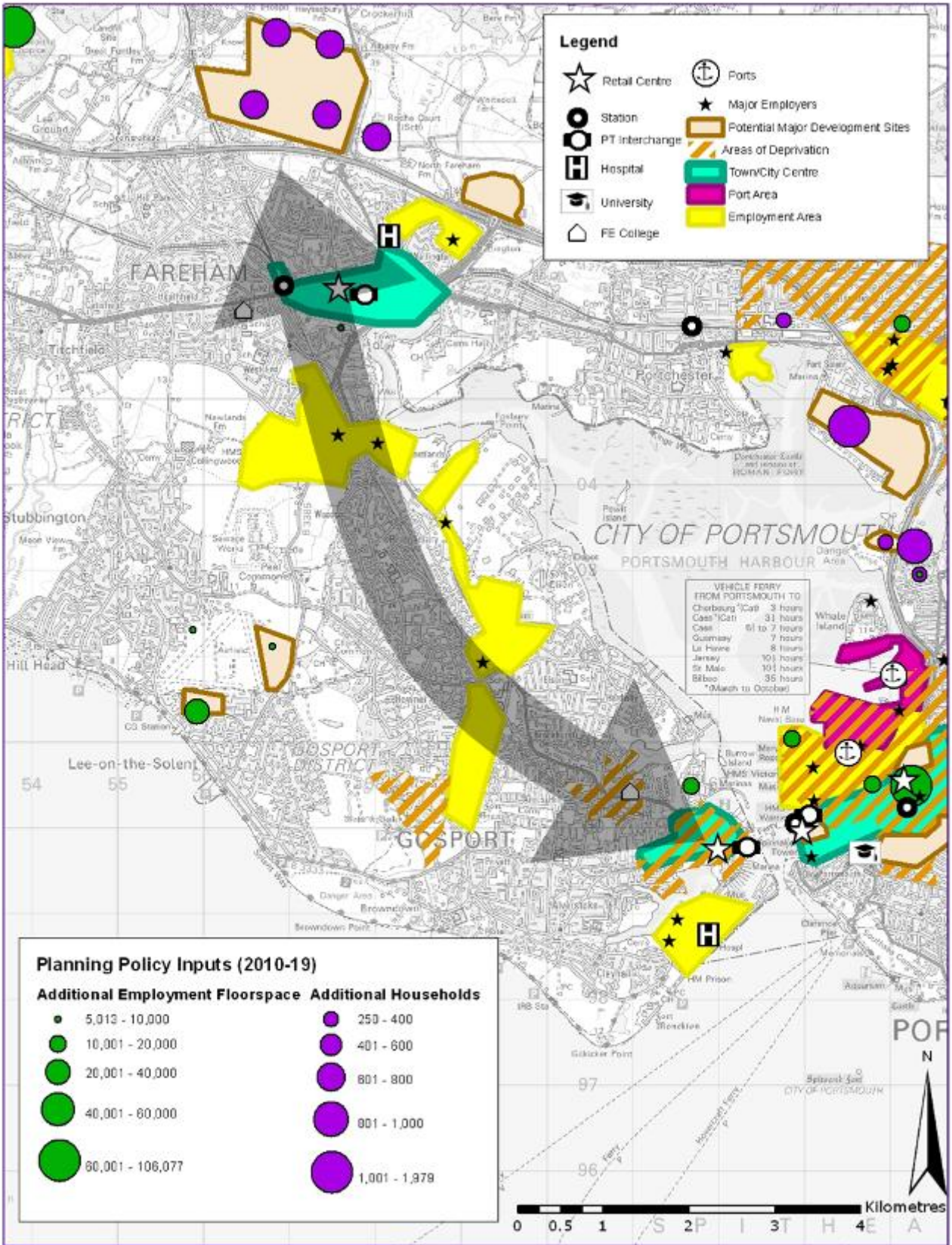
	Flows between Fareham and Portsmouth are dominated by the car (84%), with active modes and public transport each accounting for just 8% of all trips. Improving access into Gosport by active modes and bus, will help migrate this high proportion of car trips to access Portsmouth via the ferry, and so reduce pressure and congestion on the M27. The Daedalus airfield site located on the Gosport peninsula has been designated an Enterprise Zone. The site covers 82 hectares and occupies an ex-military airfield is situated in a coastal location between the cities of Portsmouth and Southampton. The site has marine access and retains a private operational runway. A sector cluster is envisaged for the site focussed on Advanced Manufacturing (Marine, Aviation and Aerospace focus). Initially it is expected that 38 - 45 businesses will locate onto the zone, creating up to 650 jobs by April 2015, and create up to 3,700 additional jobs on the EZ by 2026 Currently the Daedalus site has low accessibility by public transport. Highway access is also constrained. The low accessibility provides an opportunity for jobs to be taken by local people and so for sustainable transport modes to dominate commuting movements to the site. Gosport has three wards within the 20% most deprived nationally. Our MOSAIC analysis has shown that the Fareham and Gosport areas have a significant number of residents who are likely to respond positively to our proposals.
Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	The interventions proposed for this corridor would serve to build upon and augment a number of sizable schemes and developments already proposed or under development in the area. These include the introduction of an on-road/segregated Bus Rapid Transit (BRT) link between Fareham and the Gosport peninsula. By further investing in **bus infrastructure improvements** at key interchange locations around Gosport, the step-change improvements in bus quality and reliability can be carried through to the waiting areas – and positively promote the BRT brand and increase bus patronage. The proposed bus infrastructure improvements are focused on

	branding bays and improved information provision at Gosport Ferry Interchange, with upgraded bus shelters/stop facilities and footway improvements along sections of on-road BRT routes – which include a hospital, college and parades of shops. The BRT itself will be promoted through the use of **Personal Journey Planning** techniques whereby information and advice about the BRT will be provided directly to householders. As well as the imminent arrival of BRT, plans are well underway for the development of a major employment site at the Daedalus Enterprise Zone (EZ). To facilitate sustainable travel to the development and help promote further occupation, the site will develop a **Travel Plan** which aims to reduce the amount of single occupancy car use. In addition **bus service enhancements** are proposed to Daedalus from Gosport town centre, Fareham and the BRT corridor - increasing bus frequencies on three routes to half hourly services in peak periods. In conjunction with this are proposals for **targeted bus stop improvements** on the periphery of the Daedalus site. **Carriageway widening** on a key north-south road into Lee-on-Solent and the Daedalus EZ will greatly improve journey time reliability and provide greater road space for cyclists, on what is currently a constrained and heavily trafficked link – presenting an unwelcoming environment to cyclists. This also speeds up highway movements by reducing friction between cyclists and motorists. A package of measures is proposed to **improve accessibility for pedestrians, cyclists and bus users in Gosport Town Centre**, whilst a proposed surfaced off-road cycle track across the Alver Valley will provide a direct pedestrian and cycling link from the socially deprived area of Rowner to an existing off road cycle track which connects into the proposed main access to the Daedalus site. A **travel plan** will be developed for **Gosport Hospital.** At the Fareham end of the corridor, proposals include the provision of a new bus shelter on the A27 to serve Fareham Rail Station – and wider improvements to the bus station and High Street bus infrastructure. A new **Station Travel Plan** for Fareham will make access for existing and new passengers easier. The introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs will help to build confidence in making more journeys on foot, improve the interchange experience and onward connections. **Real Time Information** (RTI) screens will be introduced at rail stations and other key centres in the corridor, including the Gosport Ferry terminal (which will also have a **Ferry Travel Plan**), Fareham Borough Council and Fareham Shopping Centre, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority.

Rationale	The interventions proposed across the Gosport peninsula and Fareham serve to build on the substantial transport improvements and major development projects underway or planned for the area. The Gosport peninsula has long suffered from chronic transport problems, in part due to the relief of the settlement across a narrowing land mass protruding into the Solent with a few transport corridors and no rail service. The BRT scheme will benefit from the use of a disused railway line to provide an alternative access corridor through the centre of the peninsula. The wider bus infrastructure proposals incorporated within the interventions detailed above will capitalise on this new premium express bus access by providing similarly high quality waiting facilities, further emphasised by consistent BRT branding. These enhancements are further complimented by the introduction of comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. A part of the wider strategy for tackling congestion and deprivation in the area are moves to increase the number of jobs available locally, and so reduce the extent of out-commuting that currently occurs. These plans are focused around the delivery of the Daedalus Opportunity Area site, so a number of the interventions for this corridor seek to improved sustainable transport links to this area. In particular, these schemes seek to connect the site with Gosport town centre, the ferry and bus interchanges and pockets of deprivation. The introduction of coherent legible cities pedestrian signage would further support a shift towards sustainable travel.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH
Dec 2011

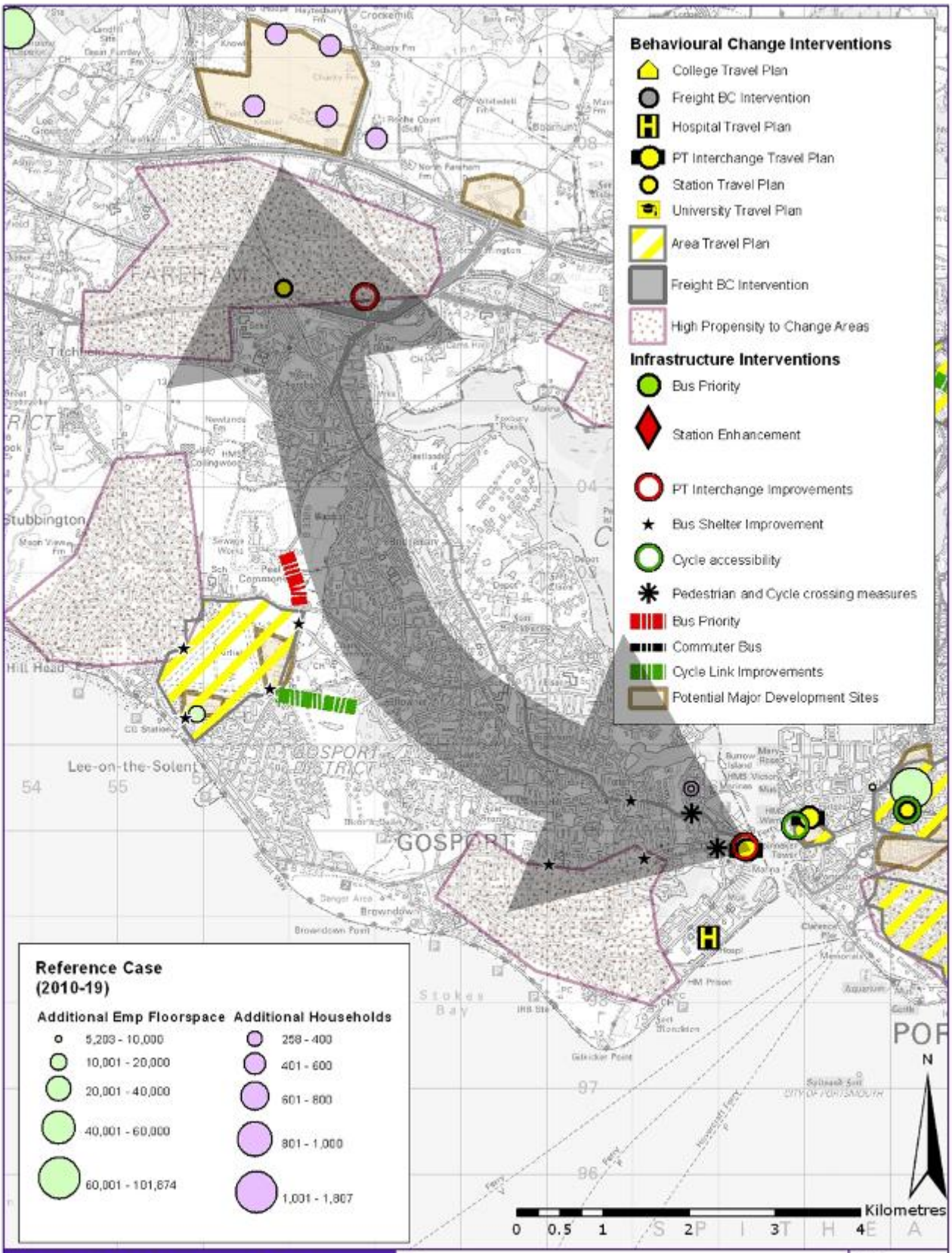
Title: C7 - Fareham to Gosport

Scale: 1:56,992 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Dec 2011

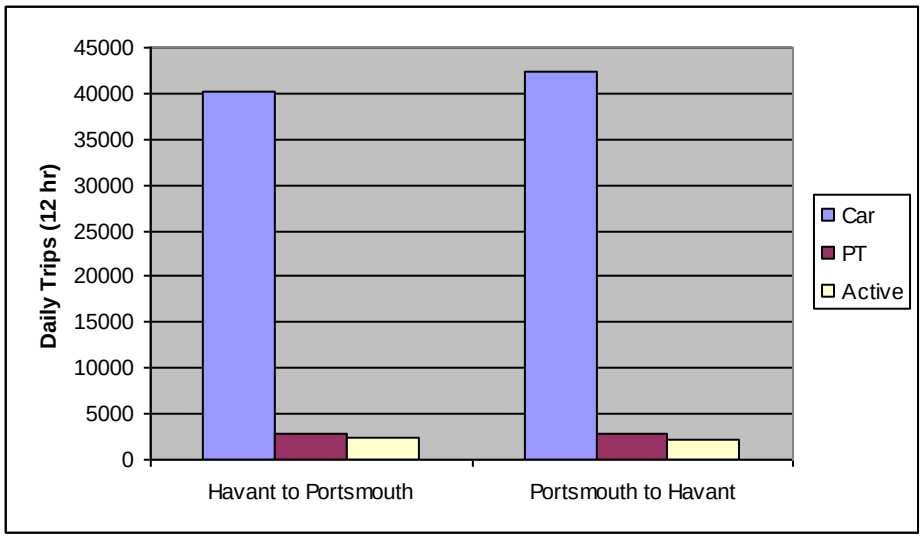
Title: C7 - Fareham to Gosport with interventions

Scale: 1:56,947 at A3

Project No.: C3A712

Figure:

mvaconsultancy

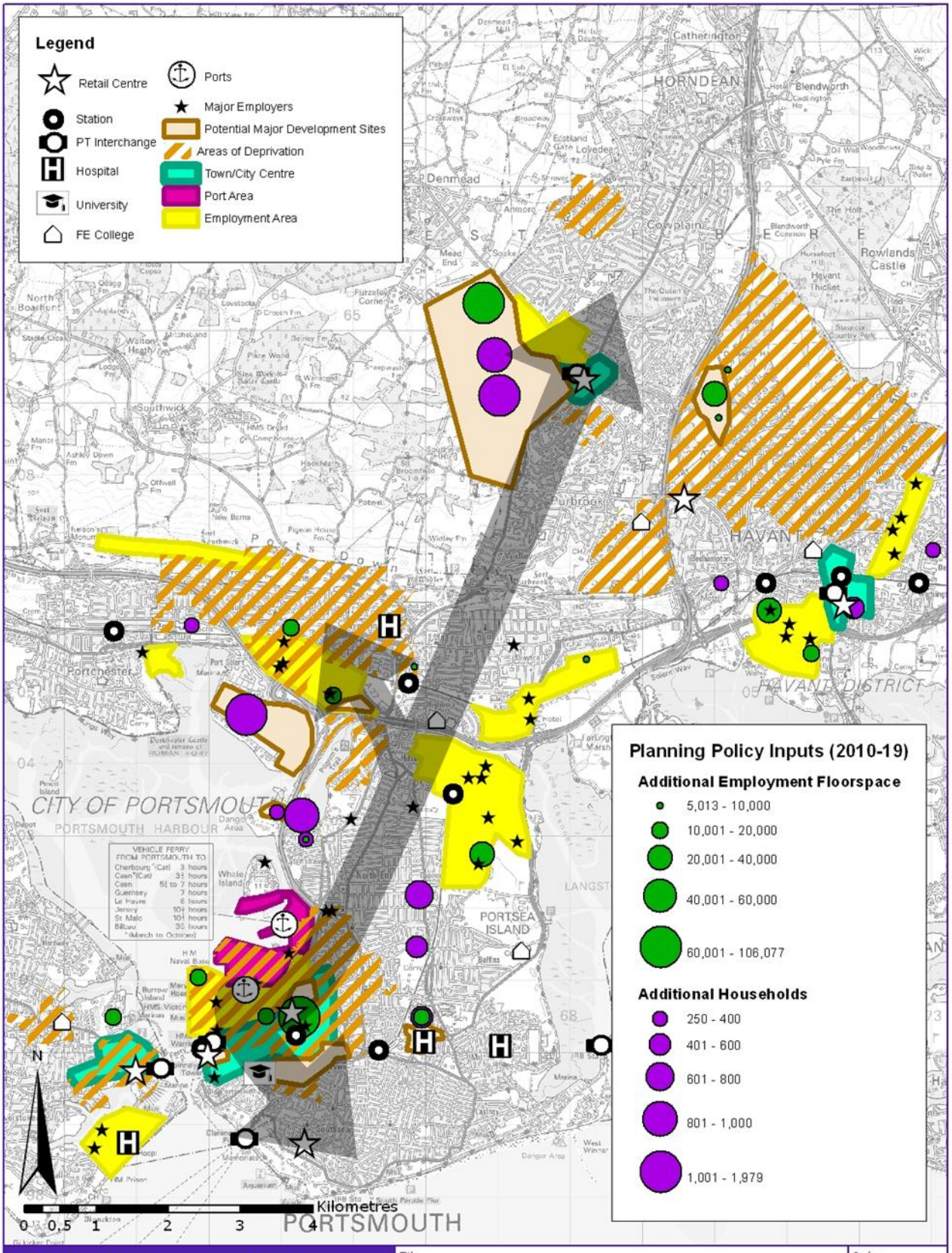
Corridor 8	Waterlooville to Southsea via The Hard (Portsmouth)
Description	This corridor connects the town of Waterlooville with Portsmouth City Centre as well as connecting Portchester and the northern neighbourhoods of Portsmouth with the City Centre. Waterlooville does not have a railway station, with the nearest being either at Havant or at Cosham, the latter being located along this corridor. The regionally important Queen Alexandra Hospital is located along this corridor, which is a key destination and employer. The UK head office of IBM is also located on this corridor as are a number of other large employers, for example the defence related businesses along Portsdown Hill, Portchester and at Portsmouth Naval Base. Portsmouth is a centre for the key marine and advance manufacturing sectors that the PUSH EDS identifies south Hampshire as having a competitive advantage in. It is critical that transport access to these sectors is not a constraint on their growth. Focussing on shifting short distance journey from car to active modes and public transport will help free up capacity and reduce congestion to facilitate growth. The majority of Portsmouth occupies Portsea Island, access to which is restricted to just three highway routes and one rail line. With Portsmouth being the main trip attractor in south east Hampshire, this poses significant transport capacity constraints – particularly in the peaks. Ferry access to Portsmouth provides important connections from Hayling Island, Gosport and the Isle of Wight 9,733 Two-way trips are made each day in the AM peak between Havant Borough and Portsmouth. The chart below shows the daily (12 hour) trips between Havant Borough and Portsmouth. A significant proportion of these are undertaken by car (89%). These trips place a significant loading on to the M275 and A3 radial routes into Portsmouth, causing congestion and delay to important economic movements to the Commercial and Naval Ports as well as Portsmouth City Centre. There is a need to reduce these short distance vehicular trips to strengthen the role of these locally and nationally important economic functions.  The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Portsmouth AM peak, 26,224 internal trips take place each, whilst the figure for the Havant area is 11,218.

	Improvements to the public transport offer will pave the way for further improvement through a wider Bus Rapid Transit, building on phase 1 between Gosport and Fareham, and Park & Ride and associated bus priority at Tipner, in Portsmouth. There are two AQMA's along the two key radial routes into Portsmouth covered by this corridor. Our MOSAIC analysis has identified significant numbers of groups assessed as likely to respond positively to our proposals.
Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	At the northern end of the corridor physical interventions include the introduction of a **town centre cycle link through Waterlooville**, greatly improving cycle access to shops and services and beyond to the bus Interchange. The scheme would shorten the Horndean to Portsmouth cycle route distance by 1.1km, and would enable cyclists to avoid a steep hill along the current alignment. Cycle parking provision would also be increased along the route and at the bus station. Alongside these measures further cycle led schemes and initiatives are proposed across the Cosham and Portsmouth City Centre areas. These include **area wide cycle accessibility and parking improvements** – with upgraded cycle parking for shoppers and retail workers at Cosham High Street and North End Shopping Centre. In addition **area wide travel plans** will be produced for Southsea, Portsdown and Cosham with specific **College Travel plans** developed at Southdown and Horndean colleges and for **Cosham rail station**. To support and promote rail-cycle interchange, it is proposed that **cycle runners** are installed on rail bridges at Cosham and Portsmouth Harbour stations. An **off-road cycle link in Paulsgrove** to the North of Portsmouth will provide a more direct and car-free route between residential areas and business/industrial parks, and will connect to existing cycle links to the International Port, Portsmouth City Centre, Naval Bases, Portsmouth and Southsea Hard Interchange and Cosham Station.

	Elsewhere, the introduction of an on-road cycle route to Cosham Station will be enhanced via an **upgraded Toucan crossing**, while more legible cycle access and **contra-flow cycle routes** to Queen Alexandra Hospital from the north via an upgraded crossing will promote sustainable travel to a major local employer. A congestion hotspot for key bus routes currently exists at the Kingston Road/Kingston Crescent junction In the south of the corridor. The junction will be upgraded to reduce delays and to introduce pedestrian crossing facilities. The introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs will help to build confidence in making more journeys on foot, improve the interchange experience and onward connections. **Real Time Information** (RTI) screens will be introduced at rail stations and other key centres in the corridor, including Gunwharf Quays, Cascades, the Historic Dockyards and the Cross-channel ferry passenger terminal, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. **Personal Journey Planning** will be used to provide local residents with information and advice on the range of sustainable travel choices available to them.
Rationale	The focus of interventions in the corridor is on enhancing and promoting the wider take up of cycling throughout the area. In particular the schemes seek to fill missing links or provide enhanced route options within the wider cycle network. These additions or extensions strengthen linkages between residential areas (some of which are deprived), transport interchanges and major local centres of employment and commerce. The installation of cycle runners and a substantial increase to cycle parking capacity at rail stations promotes access to rail by sustainable modes. This package of cycle enhancements are further complimented by area-wide travel plans and by the introduction of comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. The new AVL system will connect with the upgraded Kingston Road junction to reduce bus delays. In addition to pedestrian crossing improvements at this junction, the introduction of coherent legible cities pedestrian signage will further support a shift towards sustainable travel.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support

Prepared for TfSH
Dec 2011

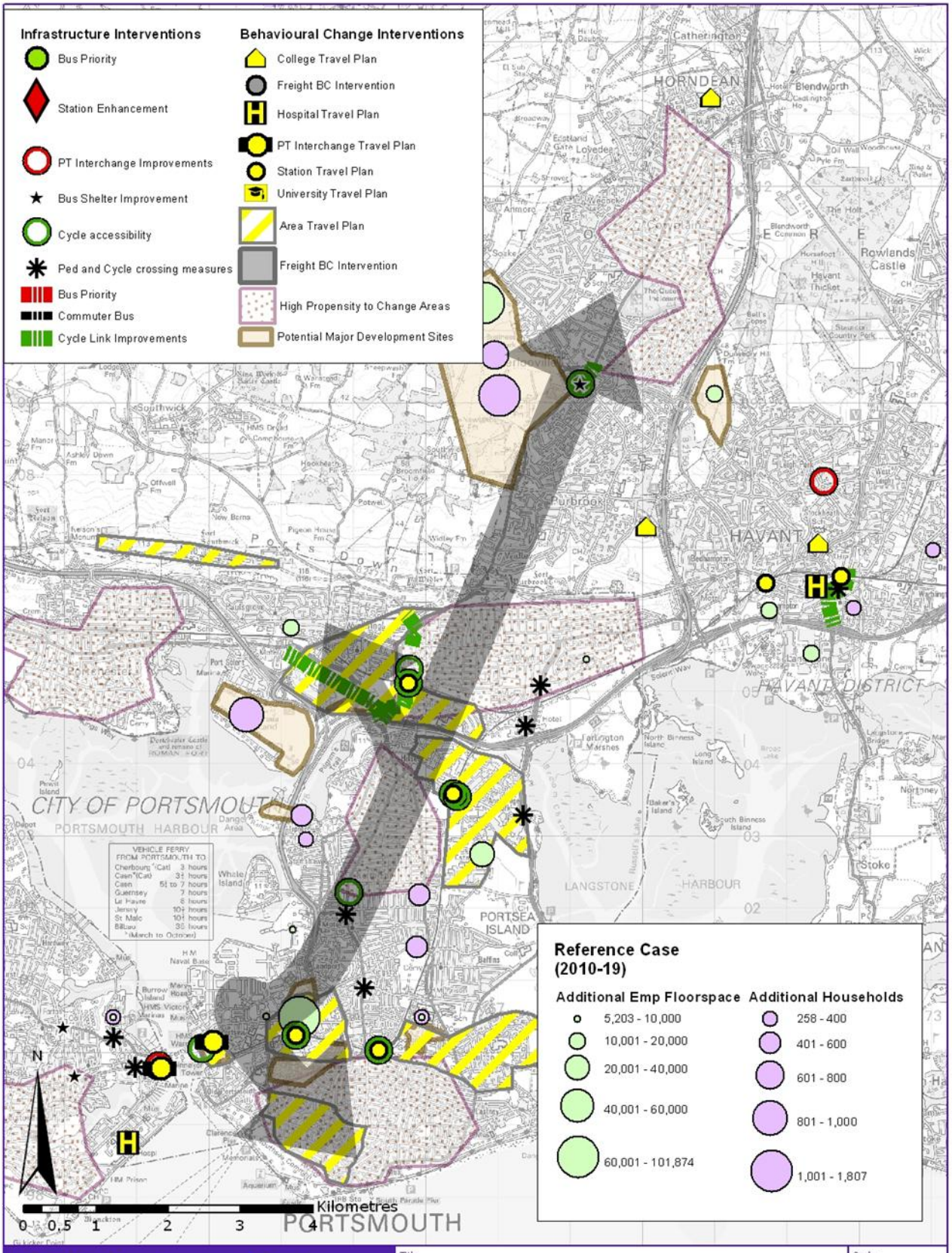
Title: C8 - Waterlooville to Southsea via The Hard

Scale: 1:67,700 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Dec 2011

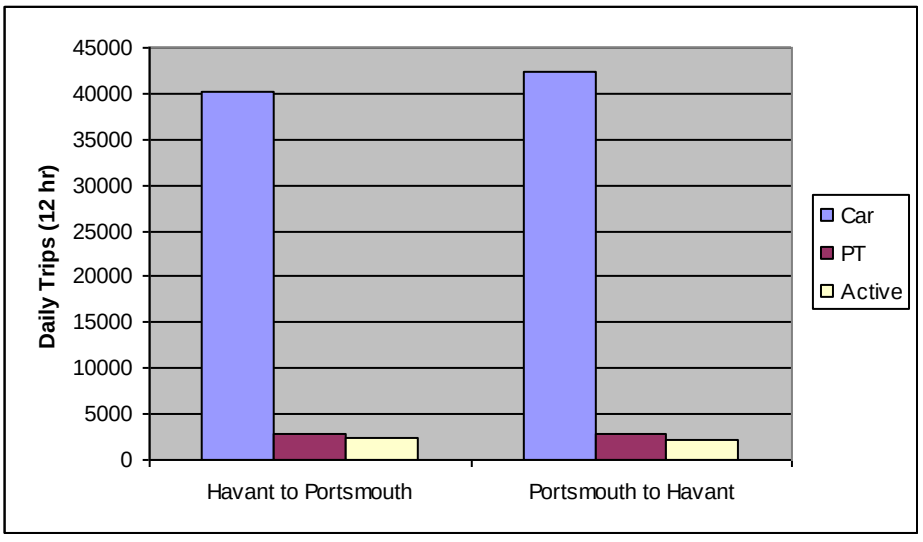
Title
C8 - Waterlooville to Southsea via The Hard with interventions

Scale
1:67,647 at A3

Project No.
C3A712

Figure

mvaconsultancy

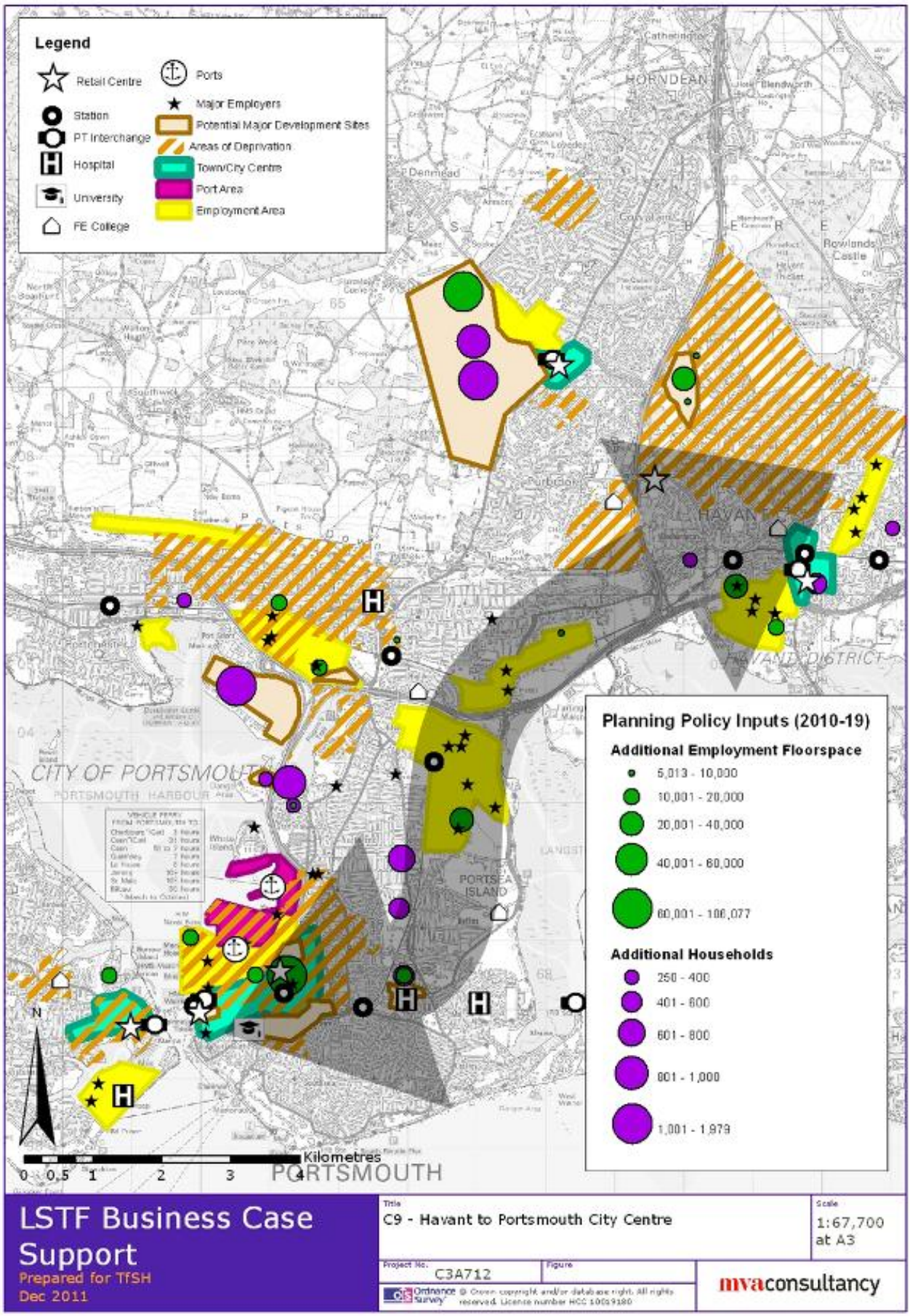
Corridor 9	Havant to Portsmouth City Centre
Description	This corridor connects the town of Havant with Portsmouth City Centre as well as connecting the northern neighbourhoods of Portsmouth with the City Centre. The Leigh Park community is an area of approximately 10,000 homes and 28,000 residents located in four wards in Havant. Leigh Park has historically not been able to tap into wider prosperity in the area and its residents have been excluded from social and economic opportunities. The 4 wards of Battins, Barncroft, Bondfields and Warren Park fall within the most deprived areas in the country and residents face a range of deprivation including high unemployment, low levels of qualifications, poor health and high numbers of young and single mothers. These factors are exacerbated both by the area's relative isolation from opportunities in the rest of the region, and by negative perceptions of the area and its community. In terms of deprivation, three of the Super Output Areas (SOA's) which make up Leigh Park are in the top 10% most deprived in England, whilst a further 12 are in the top 20% most deprived. There is a need to increase the economic activity rate and improved sustainable transport connections to education and employment opportunities form part of this. The majority of Portsmouth occupies Portsea Island, access to which is restricted to just three highway routes and one rail line. With Portsmouth being the main trip attractor in south east Hampshire, this poses significant transport capacity constraints – particularly in the peaks. Ferry access to Portsmouth provides important connections from Hayling Island, Gosport and the Isle of Wight. 9,733 Two-way trips are made each day in the AM peak between the Havant Borough and Portsmouth. The chart below shows the daily (12 hour) trips between Havant Borough and Portsmouth. A significant proportion of these are undertaken by car (89%). These trips place a significant loading on to the M275 and A3 routes radial routes into Portsmouth, causing congestion and delay to important economic movements to the Commercial and Naval Ports as well as Portsmouth City Centre. There is a need to reduce these short distance vehicular trips to strengthen the role of these locally and nationally important economic functions. 

	The above figures exclude the large number of trips that are internal to the two areas. Indeed, within Southampton AM peak, 26,138 internal trips take place each, whilst the figure for the Chandler's Ford Eastleigh area is 9,351. Improvements to the public transport offer will pave the way for further improvement through a wider Bus Rapid Transit, building on phase 1 between Gosport and Fareham, and Park & Ride and associated bus priority at Tipner, in Portsmouth. There is one AQMA's along the key radial route into Portsmouth covered by this corridor. Our MOSAIC analysis has identified significant numbers of groups assessed as likely to respond positively to our proposals.
Objectives targeted	• Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity • Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion • Improve sustainable access linking people to jobs and key facilities in our cities and towns • Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres • Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres • Improve levels of physical activity, health and wellbeing through increased active travel
Interventions	Improved cycle and pedestrian links between Havant Bus and Rail Stations via an **off-road cycle route will strengthen access to the town centre** and onward transport connections. The scheme includes the replacement of an existing pedestrian ramp which currently inhibits cycle movements and pedestrian desire lines. Improvements will also be made though upgrading **a Pelican crossing to a Toucan crossing** and through the introduction of **additional cycle parking** at Havant Bus Station. These town centre cycle accessibility improvements will be accompanied by works to widen an existing footpath to create a **shared use** cycle/pedestrian path and thereby encourage further cycle use. **Area travel plans** will be introduced in Fratton/Milton, Portsmouth City Centre, the Hard area and Hilsea Business park with an **interchange travel plan** developed for Portsmouth Harbour. To promote rail-cycle interchange, it is proposed that **cycle runners** are installed on rail bridges at Fratton Station, Hilsea Station, Portsmouth and Southsea Stations. **Rail station travel plans** will be developed at Fratton, Portsmouth and Southsea and Bedhampton. Further cycle interventions include a **secure cycle parking** compound and two tier parking at Fratton Station, and improved cycle parking at Hilsea Station. A **Brompton bicycle hire system** will be introduced at Havant offering commuters the opportunity to use a fold up bike for their journey to the station and beyond. **Havant college and Havant Hospital will also have travel plans** to reduce car-based

	commuting to these busy sites. **Junction improvements** are proposed to provide cycle and pedestrian crossing facilities, which will reduce severance and encourage mode shift to provide better access to large employment areas from nearby PT nodes and local residential areas. **Bus interchange** facilities and **public realm** will be enhanced at the Leigh Park shopping parade, which will compliment a recent regeneration initiative in Leigh Park Centre. The introduction of consistent and coherent 'Legible Cities' **pedestrian signage** at transport hubs will help to build confidence in making more journeys on foot, improve the interchange experience and onward connections. **Real Time Information** (RTI) screens will be introduced at rail stations and other key centres in the corridor, including Havant Public Service Village, the Meridian Shopping Centre and the Portsmouth - IoW Ferry Terminal, and at key bus stops within the wider corridor. Smartphone RTI readers (rather than screens) will be installed at other bus stops. The RTI system will play an important role in informing travel choices and reducing waiting time, both of which will enhance the quality of journeys. Information on bus arrival time at stops is provided by an **area-wide roll out of Automatic Vehicle Location** (AVL) hardware on the local bus fleet. The AVL system has a dual function in that it can also connect with junction signal systems to provide bus priority. **Personal Journey Planning** will be used to provide local residents with information and advice on the range of sustainable travel choices available to them.
Rationale	Improving accessibility and enhancing facilities for pedestrians and cyclists features heavily in the physical proposals for this corridor. New and enhanced links will improve connections to and between key rail and bus transport interchanges. These enhancements are complimented by the introduction of travel plans and comprehensive Real Time Information, to deliver an improved waiting experience for passengers, simplifying public transport use and helping to improve user perception of public transport provision. There is significant severance along the route between employment areas and public transport nodes/residential areas, restricting growth and the sustainability of jobs in these areas and increasing reliance on car travel. Measures to improve cycle and pedestrian crossing provisions at key junctions will help to break down these barriers. The introduction of coherent legible cities pedestrian signage would further support a shift towards sustainable travel along with personal journey planning advice.

Barriers addressed

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28



LSTF Business Case Support
Prepared for TfSH
Dec 2011

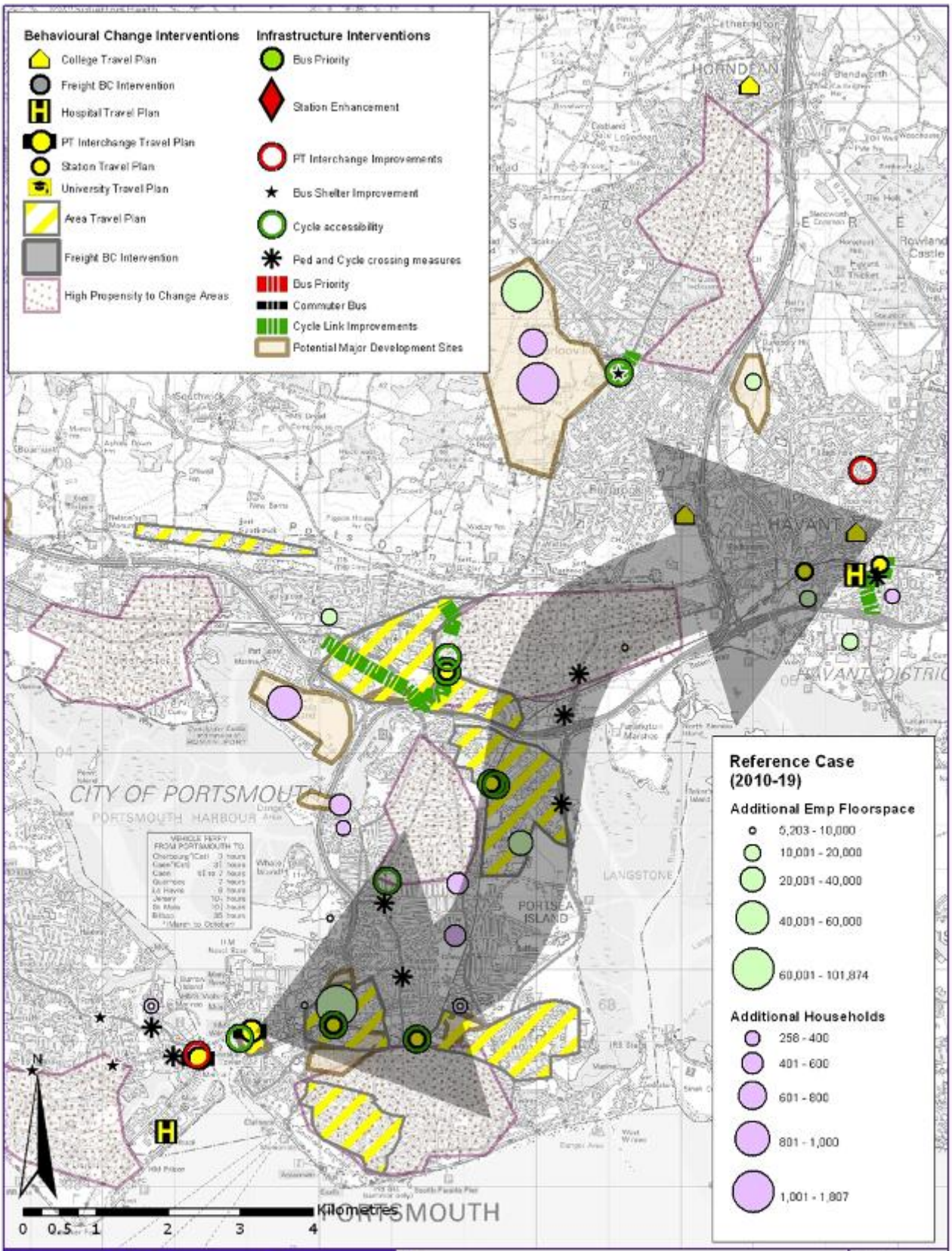
Title: C9 - Havant to Portsmouth City Centre

Scale: 1:67,700 at A3

Project No.: C3A712

Figure:

mvaconsultancy



LSTF Business Case Support

Prepared for TfSH
Dec 2011

Title
C9 - Havant to Portsmouth City Centre with interventions

Scale
1:67,647 at A3

Project No.
C3A712

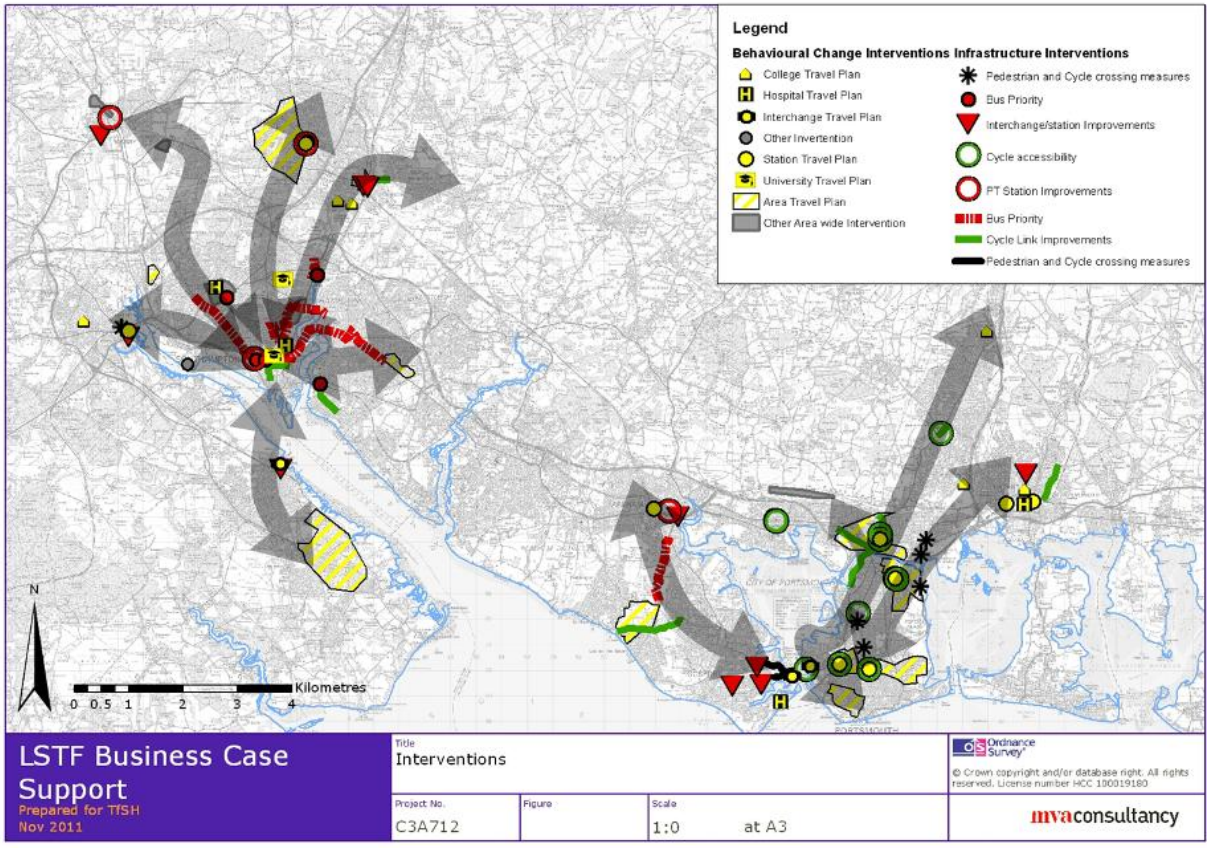
Figure

mvaconsultancy

2.8.4 Behavioural Change Area Wide Interventions

To reinforce the measures being implemented along each corridor an area-wide social marketing campaign will be developed. This will encompass the creation of a specific brand and associated marketing strategy targeting key groups of people most likely to change their travel behaviour. This use of data, based on MOSAIC sampling, will enable messages and calls to action to be developed with the greatest likelihood of success. These techniques have been used successfully in many other UK-based integrated behaviour change programmes, including in Darlington, Worcestershire, Peterborough and Sutton.

As well as the travel awareness campaign, a series of events and activities designed to engage residents and businesses in a creative and entertaining way, whilst providing information and advice to assist with behaviour change, will be held throughout the area. *Map 2.18* shows the location of behavioural change interventions in relation to the corridors.



Map 2.18: Location of Behavioural Change and Physical Interventions

As part of a comprehensive area-wide programme to support the smart ticketing and corridor specific measures, other area-wide initiative that we will deliver include:

- A specific programme aimed at promoting the new smart card system to both promote and advice residents on the benefits of the new system
- Development and delivery of a legible bus network to make bus use simple and convenient, whilst reinforcing through its design the wider branding

- Work with schools to continue the recent successes of encouraging more children and their parent s to walk, cycle or use public transport to get to and from school
- The continued delivery by Sustrans of Street Tred, a successful programme working at grass roots level to encourage more take up of active travel modes
- Support for those returning or seeking work, working in partnership with Job Centre Plus (see separate case study, below)
- Work Place Travel Plans for key employment sites (see case study, below)
- In partnership with car club operators, an expansion of the car club system will be undertaken offering residents the chance to use a car as and when they need without having to own and park the vehicle

These comprise interventions that have worked well elsewhere and from which, lessons have been learned. The detailed MOSAIC analysis we have undertaken for Southampton (Appendix 2.3) will be replicated for the wider TfSH area and will inform the exact nature of these proposals.

Jobcentre Plus Smarter Travel Intervention Package

Project justification / need for the project

Portsmouth and Southampton are now in the bottom 25% of the most deprived cities in the country. Many of the low income groups in Southampton were found to be below the local average of one car per household. The National Travel Survey clearly identifies that people without access to cars are less likely to travel, with both the number and length of trips significantly reduced for no car households (2010 survey). This also applies to journeys for work. Job seekers without access to a car maybe unwilling to look for vacancies outside of a narrow geographic area, which significantly limits their opportunities.

What's been delivered previously in the local area

Hampshire's successful New Jobs, New Futures project (2009-11) created 900 jobs in the Hampshire and the Isle of Wight. Participants received a weekly travel pass to support access to work. 11.6% of the unit cost per participant (£20) was used to support travel - a reflection of the fact that the costs of transport were considered to be a genuine barrier to employment for those on a minimum wage.

The long term unemployed in the area, supported through the Work Programme by A4e and Maximus UK, receive travel support for interviews, and trips to the office, as well as in some cases for the first month of their new employment to cover the gap between benefits being withdrawn and their first wage packet. This is very similar to the support offered in the successful Workwise travel programme in the Midlands, which has been operating since 2004 to overcome transport barriers to employment, and stands as best practice in this area of work.

Project Outline:

The intervention will comprise two elements of travel support for job seekers.

1) **Pilot Job seekers free travel subsidy (210k)**

Provide free travel for two key periods of time (while job seeking and for the first month of employment) for a pilot group of the target group - 18-24 year old job seekers.

Intervention justification: The proportion of jobseekers registered with the JCP between the ages of 18-24 is disproportionately high – between 26% and 35%. The first months free travel, will engage newly unemployed young people, harness motivation, optimise their job search and exposure to opportunities and build confidence, while establishing sustainable travel habits. The second months free travel is to ease the transition between Job Seekers Allowance and wages.

2) Pilot workwise travel advisor (130k)

Place travel advisors in JCP's to administrate the free travel pass for the youth cohort participating in the free travel scheme, and provide personal travel support, in the form of journey plans to interview locations and also training in journey planning. This service will be available to all job seekers to widen the travel horizons of those residents living in the areas more deprived neighbourhoods, and raise awareness of public transport links.

Intervention justification: One of three policy recommendations of the ***Access all areas: Linking people to jobs (Centre for Cities, Sep 2011)*** is 'Widening the spatial horizons of people living in the most deprived parts of South Hampshire'.

Journey planning legacy – the advisor would be responsible for production of a 'how to' leaflet (showing how to use local online journey planning resources) and could be responsible for training the JCP advisors in journey planning.

3) Delivery in South Hampshire

The Work wise advisor will work collaboratively with JCP Advisers to reduce barriers to employment. This could utilise the flexible funding pot that exists within the JCP to reduce barriers to employment. This could be used to provide contributions to bike purchase, cycle training etc if it was considered that lack of transport etc. was the key barrier.

Project costs

Free Travel Pilot Scheme	**2012/13**	**2013/14**	**2014/15**	Totals:
Total cost:	**£70k**	**£70k**	**£70k**	**£210k**
Unit cost per person:	£160	£160	£160	
No. of beneficiaries:	437	437	437	1,311
Travel advisor/s	**2012/13**	**2013/14**	**2014/15**	
Total cost:	**£26k**	**£52k**	**£52k**	£130k
Unit cost per person:	£13.00	£13.00	£13.00	
No. of beneficiaries:	2,140	4,280	4,280	10,700

Figures based on 214 working days per year x 10 job seekers per day assisted. This is a conservative estimate, and is based on the Centro Workwise Advisors who see on average a 'new' candidate for assistance every 20-25 minutes.

Evaluation for both elements would include amongst other things - comparison of off-flow rate and speed of off-flow between those who receive the free travel passes and control group who do not.

Work Place Travel Plans Smarter Travel Intervention Package

Project justification/need for the project

The cost of congestion on business is estimated by the CBI to be a loss of £20 billion a year. Reduced congestion can also increase the attractiveness of the UK for outside investment, which is a key opportunity for South Hampshire partly as a result of the Port of Southampton.

Individual workplace travel plans are highly costs effective, typically reducing commuter car driving by between 10% and 30%. The typical cost to the local authority for promoting workplace travel plans is £2–£4 per affected employee per year. Even taking the (median) average of a 15% reduction in car trips, this percentage translates into a lot of car miles and congestion avoided.

The difference to congestion is proportionately much more because the difference between a jammed road and a free-flowing one can be just a small amount of traffic that tips it over capacity. Travel plans reduce traffic most during the key periods – the rush hour peaks.

Recent research concluded workplace travel plans should be considered a feasible and effective physical activity promotion strategy that can have public health impact, largely as a result of the fact that travel plans were seen in many cases to increase walking and cycling to levels that were sufficient to fulfil required physical activity requirements Staff who are physically active for 20 minutes a day take less than half the annual sick leave of staff who are only active for 10 minutes a day. Thus as well as the direct benefits of reduced congestion for business and industry, travel plans also have secondary benefits for economic growth and regeneration via the knock on effects for employee health and reduce /levels of sick leave.

What's been delivered previously in the local area

Southampton University currently chair the Travel Plan Forum which has operated to support travel planning in the area, they currently match fund items such as cycle parking, shower facilities, electric vehicle charging points at workplaces, PT information points etc. and establishing a framework for collective delivery and evaluation of travel plans are key successes of the TPF.

Project Outline:

Eight of the nine corridors have between one and four business travel plan initiatives planned. These are largely to be area based travel plan networks covering retail, business or industrial areas, with the exception of a travel plan for the ExxonMobil Oil Refinery in the Waterside corridor. Many of these areas already have travel plan networks so the intervention is partly to bolster and enhance networks that already exist, support forums for exchange of best practice, and offer packages of interventions that fit with each businesses' individual requirements.

As a reflection of recent research, local experience and belief that its better to engage a business doing something to manage their transport, rather than alienate them by making requests that they are uncomfortable with (i.e. doing a full staff survey or following an rigid approach) – ***we will be employing a flexible approach that fits with businesses organisational needs and culture, offering packages of support that may not always be site specific****. We can see that there will likely be interest in generic measures such as journey planning information, support with discount negotiations, corporate purchase of Smart Cards, Dr Bike activities and provision of cycle storage- meaning we can increase efficiencies and uptake by offering a smorgasbord of options which businesses can select from (with basic requirements for each one. e.g. cycle storage – cycle count requirement.)*

Corridor	Intervention	2012/13	2013/14	2014/15	Totals:
Corridor 9	Hard area travel plan	£25k	£25k		£50k
	Hilsea Business Travel Plan Network		£30k	£30k	£60k
	Portsmouth City Centre Travel Plan Network	£30k	£30k		£60k
Corridor 8	Southsea Area Travel Plan		£30k	£30k	60k
	Portsdown travel Plan Network	£30k	£30k		£60k
	Cosham Area Travel Plan	£15k	£45k	£45k	£105k
Corridor 7	Daedalus Travel Plan		£30k	£30k	£60k
Corridor 6	East Point Centre Travel Plan		£15k		£15k
Corridor 5	Eastleigh Town Centre Travel Plan		£30k	£30k	£60k
Corridor 4	Chandler's Ford Commuter Forum / Area Travel plan	£25k	£25k		£50k
Corridor 3	Adanac Business park TP Network		£30k	£30k	£60k
Corridor 1	ExxonMobil Fawley Oil Refinery Travel Plan		£30k		£30k
	Yearly totals:	**£125**	**£350k**	**£195k**	**£670k**
		Total Cost over three years:			**£670k**

Cost Benefit Example:

Over 3000 people are employed at the **Fawley Oil refinery and chemical site** in the Waterside Corridor (assuming 70% travel by car) - a reduction in car use of 15% results in 315 people walking, cycling or using public transport, which is 630 car journeys a day removed from the road.

This equates to 134,820 journeys and 1,294,272 commuter miles per year removed from the roads, at a cost 0.023179p per mile.

Rationale and Fit with Barriers and Local Objectives

Local Objective	How the Area-Wide Behavioural Change Programme Supports the Local Objective
Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity	• Working with partners and supporting entry and return to work through initiatives such as a travel subsidy and a Work wise travel adviser.
Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion	• The programme seeks to encourage people to shift mode from car to public transport and active modes, particularly for shorter trips. If successful this will reduce highway demand and reduce congestion.
Improve sustainable access linking people to jobs and key facilities in our cities and towns	• In many cases a good public transport service and active mode provision is available, it is just that people are either not aware of their options or their decisions are affected by particular barriers. Improved marketing and training can improve confidence and uptake of more sustainable travel habits.
Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres	• A consequence of mode shift to active modes and the private car will be reduced vehicle km's are carbon.
Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres	• Support for those returning or seeking work, working in partnership with Job Centre Plus will target those areas that are identified as having higher levels of unemployment.
Improve levels of physical activity, health and wellbeing through increased active travel	• The behaviour change programme seeks to increase use of active modes and public transport options. A consequence of this will be improved physical activity levels.

Performance Against Barriers

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28

The area-wide behavioural change programme scheme supports all six of the local objectives and facilitates progress against 17 barriers.

2.8.5 Case Studies

In order to be confident that our proposals are realistic and deliverable, we have researched where similar interventions have been delivered successfully elsewhere. This is presented below.

A. Smart Ticketing Case Studies and Evidence

Fares can be confusing and off-putting, especially for new users, and information on fares is not widely available. Ticketing presents problems for users and operators, and substantial efficiency savings can be achieved by introducing new payment systems. While sustaining revenue is important for operators, development of new ticketing and fare arrangements is fundamental to growth and can improve revenue streams.

Southampton has been one of the leading authorities in the smartcards field and is also the first authority in the Country to have an online registration system for concessionary pass holders and it is planned to expand and roll out this experience throughout the TfSH area building on the experience of both local authorities and bus operators.

A fully integrated system could include other transport services such as ferries, bridge tolls and local rail. Further development could include other non-transport applications such as local authority facilities.

The following case studies confirm that we are using tried and tested technology that has had a significant positive impact on public transport patronage growth in other areas. Some of the areas presented exhibit similar characteristics to South Hampshire, and so provide us with the confidence of delivering a successful scheme locally.

By improving boarding times, vehicle idling and removing the need for paper-ticketing the project aims to reduce carbon emissions whilst aiding economic growth.

1. London Oyster Card

The introduction of the Oyster card along with simplified fares, better vehicles and frequency improvements has led to around a third more public transport journeys in London since 2000. London's Travelcard and simplified fare structures have been estimated to contribute around a third of the total growth in bus usage in the capital but with large public subsidy.

2. Growing Patronage in the West Midlands

Ticketing initiatives can also bring about growth in patronage. From 2009 passengers in the West Midlands can buy multi-operator bus tickets through the Payzone consumer payment network, encompassing a wide range of retail outlets. Sales of these tickets have increased by 25% among adults, while child ticket sales have risen by 37%. Integrated ticketing can also bring benefits, notably patronage growth.

3. Uni-link Integrated Success

Uni-link has increased annual patronage from 1m to over 6m passengers in less than six years. The bus company's investment in quality buses, coupled with smart ticketing and payment arrangements, as well as driver training has meant that over 95% of passengers are satisfied with the service.

The Uni-link success story provides confidence that smart ticketing will be embraced by local bus users in South Hampshire and represents the model we seek to replicate across the nine corridors identified within this proposal.

4. Oxford Smartzone

Stagecoach, the Oxford Bus Company and Thames Travel have worked a commercial smart ticketing solution which is the first City Wide ITSO interoperable system in the UK. Passengers can now use either the Stagecoach 'Smart' card or the Oxford Bus 'the Key' card to travel on any bus within the zone. Coordinated timetabling and ticket operations will result in a significant reduction in bus numbers travelling through the City, reducing traffic congestion and carbon emission without any reduction in service to passengers.

The ITSO-compliant scheme sees passengers being able to use one set of smartcard products to travel on any bus within the zone, as well as coordinated timetables on four of the busiest routes. The inter-operable smartzone product is being developed as part of the Transform Oxford scheme so that passengers can load an interoperable ITSO product on to either a Go-Ahead or Stagecoach smartcard and use it seamlessly for travel between different operators' services.

5. Scotland

The Scottish Government is rolling out its Smart and Integrated Ticketing Strategy through a joint venture company developing a cashless, multi-modal, multi-operator transport smart media ticketing and payment system and a revenue allocation system.

So far in Scotland:

- There are 1.5 million journeys a day on public transport in Scotland. More than 80% of these journeys are by bus.
- Some 1.2 million smartcards have been issued for use in the national bus concessionary travel scheme (see below).
- Following the £40 million roll-out of ITSO smart enabled ticket machines across all operators, it is estimated some £20 million a year is saved through the accurate recording and implementation of concessionary travel, with a fall of some 15 to 20 million journeys claimed by operators.
- Dumfries & Galloway and Dundee are looking at running enhanced commercial services on the back of the ITSO-compliant concessionary card scheme.
- Lothian buses are also looking at commercial schemes which could include using the ITSO data for an enhanced customer management system.
- First ScotRail's weekly and monthly season ticket customers can now buy and use ITSO-compliant Smartcards at in-station ticketing machines on the Edinburgh to Glasgow route.

B. Behavioural Change Case Studies and Evidence

Over the last decade there has been a growing interest in the ability of 'smarter choice' or 'smarter travel' measures to achieve a shift in travel behaviour in favour of sustainable modes. Both these terms, which have previously been referred to as 'soft' measures, are used to describe techniques based around persuasion and the provision of information and small-scale infrastructure schemes designed to encourage greater use of sustainable travel modes. Support for smarter choice measures grew after the publication of a 2004 Department for Transport (DfT) research study called Smarter Choices: Changing the Way We Travel. The study concluded that smart measures had the potential to deliver substantial changes in travel behaviour, and led to the funding of four large scale smarter choice programmes in the UK.

The four smarter choice programmes have now been delivered in three towns and one London borough over the last six years. From 2004 to 2009 the DfT funded the 'Sustainable Travel Town' programme, which saw the roll-out of smarter choice measures in Darlington, Peterborough and Worcester. From 2006 to 2009 Transport for London (TfL) funded a borough-wide programme, which focused on changing the travel habits of residents in the London Borough of Sutton. Most recently in 2009 a similar TfL-funded programme was launched in the London Borough of Richmond, which is currently being delivered until 2012.

This report reviews the evidential outcome of the four smarter choice programmes in Darlington, Peterborough, Worcester and Sutton and examines the extent to which these kinds of programmes are worth investing in.

Smarter Choice Programmes overview

1 Darlington – 'Local Motion'

Darlington has a population of 100,000 and is characterised by a trend of de-centralised employment where a growing number of jobs have been moved to out of town sites in business parks and retail distribution centres. Darlington has lower than average levels of car ownership (69%).

Local Motion was the brand name used to market Darlington's travel town programme. Over 5 years, Darlington spent £4.4 million on the programme. Almost 60% of this funding was spent directly on smart measures, of which personal travel planning and travel awareness campaigns received most investment.

In 2005 Darlington was selected as one of the 6 Cycling Demonstration Towns. This attracted an additional £1.5 million in funding, which was largely spent on cycling infrastructure.

Total investment per person per year: **£8.8**
(excludes Cycling Demonstration Town funding)

2 Peterborough – 'Travel Choice'

As a 'new town', Peterborough has seen substantial growth in residential developments over the past 40 years, and its urban population grew from 137,000 to 140,500 over the course of the travel town programme. Car ownership levels reflect the average for England, with around 74% of households owning a car.

Peterborough's travel town programme was branded Travel Choice, and received

£6.8 million in funding over 5 years. Like Darlington, personal travel planning and travel awareness campaigns were the smart measures which received most investment. Around 50% of the total expenditure was allocated to smart measures.

Total investment per person per year: **£9.80**

3 Worcester – 'Choose How You Move'

Unlike Darlington and Peterborough, Worcester is run by a county council rather than unitary authority. The travel town programme, branded Chose How You Move covered the City of Worcester, which has a population of around 93,500. The city has high levels of car ownership with an above average figure of 77%.

The programme received a total of £4.4 million over 5 years, of which just over 40% was spent directly on smart measures. Of these, personal travel planning and walking and cycling promotions received most investment.

Total investment per person per year: **£9.40**

4 Sutton – 'Smarter Travel Sutton'

The London Borough of Sutton is an outer London borough with a population of around 187,000. It consists of 7 district centres including Sutton town centre. At 77%, the borough has one of the highest car ownership levels in London and an above average level on a national scale.

The 3-year programme branded Smarter Travel Sutton received £5 million of funding from Transport for London.

Total investment per person per year: **£8.90**

Monitoring Mechanisms

The main data collection sources in Darlington, Peterborough and Worcester were:

- Travel surveys of 4000 residents in each town each year (2004 and 2008) capturing attitudinal data and self reported travel behaviour
- Smaller interim household surveys in some areas
- Bus patronage data
- Automatic and manual counts of cyclists
- Manual counts of pedestrians
- Automatic and manual motor vehicle counts
- Data from the National Travel Survey (NTS) and traffic counts from the National Road Traffic Estimates (NRTE) in medium-sized towns was used as a control sample

The main data collection sources in Sutton were:

- Telephone travel surveys of 1,500 Sutton residents each year (2007, 2008 and 2009) capturing attitudinal data and self reported travel behaviour
- Bus patronage data
- Automatic counts of cyclists
- Automatic motor vehicle counts
- A telephone survey of 500 residents in the neighbouring borough, automatic counters on the TfL London Road Network and results from the London Travel Diary Survey (LTDS) were used as control data

Behaviour Change Interventions

All programmes involved a wide range of travel planning tools and social marketing techniques to achieve behaviour change. In many cases, individual projects were delivered in partnership with key stakeholders such as the local police, environmental charities, bike shops, the local Primary Care Trust, transport consultants, design agencies, regional transport agencies and the local chamber of commerce.

Key elements of each programme included:

- The development of a strong brand identity
- Personal travel planning –individual households were visited and offered tailored advice and information on local travel options.
- School travel planning
- Workplace travel planning
- Travel awareness campaigns and direct marketing techniques
- Major festivals, events and road shows
- Dedicated website containing links to specific projects and offering general travel advice and information
- Additional cycle parking
- Car club scheme (Sutton only)

Results: Mode Shift, Awareness and Attitudes

All four smarter choice programmes resulted in a reduction in car trips and an increase in sustainable travel modes. Counters in each area indicated a reduction in traffic of between 2.4% and 3.2%, with Darlington and Sutton seeing the greatest reductions. In terms of mode share, all travel towns saw a percentage point reduction in car drivers ranging from -2% to -4% (see *table 1*). Darlington and Sutton saw the largest percentage decrease in car use (driver and passenger) with 13% and 10% decreases respectively.

Use of public transport (mainly buses) increased significantly in Peterborough and Worcester. Peterborough saw the greatest rise in bus patronage with a 33% increase (see *table 1*). Although external factors such as population growth and concessionary fares could have fuelled this increase, Peterborough spent the highest proportion of its funding on public transport information and marketing.

Walking levels grew during the smarter choice programme delivery in each travel town. In Darlington, Peterborough and Worcester the household surveys indicated that walking trips per person increased by between 10% and 14%. Conversely the national trend pointed towards a 9% decrease in trips per person. Mode share data also suggested that walking had increased in each travel town with Darlington and Sutton seeing the greatest increases (see *table 1*).

Sutton and Darlington saw significant rises in cycling levels by the end of the smarter choice programmes. Cycle counters in Darlington showed an increase in cycling levels of 50% to 60%, and as much as 75% in Sutton (compared with only 12% in London). Mode share data also pointed towards huge percentage rises in both places with a 200% increase in Darlington and 250% increase in Sutton (see *table 1*). A low baseline at the beginning of each programme attributed to these large figures as well as the particular focus both travel towns placed on healthy travel. Darlington's status as a Cycling Demonstration Town also helped to boost cycling, with greater investment in cycle infrastructure and intense promotional activity. On a national level, cycling trips per person were seen to decrease by 9% and in Croydon, Sutton's data control area, cycling flows decreased by 12%.

Table 1: Mode share in travel towns before and after smarter choice programmes

		Darlington	Peterborough	Worcester	Sutton
Car driver	Before	41%	43%	45%	46%
	After	37%	39%	42%	44%
	Change in % point	-4%	-4%	-3%	-2%
	% increase/decrease	10% decrease	9% decrease	7% decrease	4% decreasee
Car passenger	Before	21%	23%	21%	12%
	After	19%	22%	20%	8%
	Change in % point	-2%	-1%	-1%	-4%
		10% decrease	4% decrease	5% decrease	33% decrease
Walk	Before	25%	22%	25%	19%
	After	29%	25%	28%	22%
	Change in % point	+4%	+3%	+3%	+3%
	% increase/decrease	16% increase	14% increase	12% increase	16% increase
Cycle	Before	1%	5%	3%	0.6%
	After	3%	6%	3%	2.1%
	Change in % point	+2%	+1%	0%	+1.5%
	% increase/decrease	200% increase	20% increase	No change	250% increase
Public transport	Before	12%	6%	6%	21%
	After	12%	8%	7%	22%
	Change in % point	0%	+2%	+1%	+1%
	% increase/decrease	No change	33% increase	17% increase	5% increase
Other	Before	0%	1%	0%	1%
	After	0%	0%	0%	2%
	Change in % point	0%	-1%	0%	+1%
	% increase/decrease	No change	100% decrease	No Change	100% increase
All car (driver and passenger)	Before	64%	66%	66%	58%
	After	56%	61%	62%	52%
	Change in % point	-8%	-5%	-4%	-6%
	% increase/decrease	13% decrease	8% decrease	6% decrease	10% decrease

The development of a strong brand identity was a strategy adopted in each travel town. This helped to create public awareness of each smarter choice programme. Sutton was the only travel town which measured awareness of the overall programme against a control sample. When asked if residents had heard of Smarter Travel Sutton, 32% of Sutton residents replied 'yes' compared to only 4% of residents in the control borough.

Public support for all smarter choice programmes was evident with 81% of Sutton residents agreeing that it was the type of service that should be invested in, and between 85% and 94% of residents in the 3 other travel towns agreeing that sustainable transport modes should be made a priority in transport policy.

Attitudinal surveys suggest that perceptions of sustainable travel modes were more positive after the delivery of the smarter choice programme in each travel town. *Table 2* shows that residents in Darlington, Peterborough and Worcester were more satisfied with public transport after the intervention, and each travel town saw a reduction in residents agreeing that there was no alternative to the car. *Table 3* shows that after the Smarter Travel Sutton programme, a growing number of residents strongly agreed with statements such as 'the benefits of walking and cycling outweigh the convenience of using a car', 'there are lots of bus routes local to me' and 'there is provision for cyclists in my area'. A decline in the number of residents who agreed that access to a car was essential was also evident in Sutton. Although these trends were also apparent in the control area, they were less marked with smaller percentage changes.

Table 2: Attitudes towards public transport and alternatives to the car in Darlington, Peterborough and Worcester before and after the smarter choice programmes

		Satisfied with public transport (%)	Public transport is better than it was 4 years ago (%)	Public transport will be better in 4 years (%)	There is no adequate alternative to the car (% agree)
Darlington	**2004**	39%	30%	30%	44%
	2008	45%	26%	29%	41%
PPeterborough	**2004**	28%	27%	34%	33%
	2008	51%	35%	32%	30%
Worcester	**2004**	26%	19%	18%	54%
	2008	37%	31%	34%	48%

Table 3: Attitudes towards public transport and alternatives to the car in Sutton and the control area before and after the smarter choice programme

		Having access to a car is essential to me (% strongly agree)	The benefits of walking and cycling outweigh the convenience of using a car (% strongly agree)	There are lots bus routes local to me (% strongly agree)	There is provision for cyclists in my area (% strongly agree)
Sutton	**2006**	69%	25%	54%	26%
	2009	63%	30%	71%	30%
Control area	**2006**	73%	19%	56%	18%
	2009	69%	23%	57%	22%

Social, Environmental and Economic Impacts

As well as creating modal shift, the smarter choice programmes made a positive impact on other areas such as the local economy, carbon reduction targets, air quality, health and quality of life.

The reduction seen in car trips is likely to have helped reduce congestion and improve journey reliability. Darlington and Peterborough's smarter choice programmes helped to eliminate potential congestion created by substantial increases in population and employment.

Smarter choice programmes help to improve the local economy by encouraging communities to make short trips to district centres within easy walking and cycling distance. Studies also show that businesses receive more trade from passing pedestrian flows opposed to vehicle flows. Investment in physical measures to attract pedestrians and cyclists often result in enhancements to the public realm, which can help attract local businesses to an area.

The smarter choice programmes all contributed to carbon reduction targets of each Local Authority. Household surveys from Darlington, Peterborough and Worcester helped to provide an estimate which suggests that 17,510 tonnes of carbon dioxide per annum could have been saved across the 3 towns over the 5 year programme period.

All four travel towns saw rises in walking and cycling, which will have contributed to increased levels

of physical activity. Sutton's smarter choice programme resulted in a joint initiative with the local Primary Care Trust called Active Steps. It promoted walking and cycling as regular forms of exercise to people with certain health problems. The initiative has raised the profile of combining transport and health projects and has shown to have increased levels of physical activity amongst participants.

Although difficult to measure, it could be argued that smarter choice programmes can have a positive impact on quality of life. For example each travel town made it easier to access a range of destinations, improve the experience of end to end journeys and increase social capital by encouraging community engagement. Other positive externalities include widening employment opportunities by improving access to workplaces, improving pupil attendance at school, offering tailored travel information for people with mobility difficulties, and offering cheap travel options to people who can't afford to run a car.

Conclusion

It is evident that the smarter choice programmes in each travel town have been successful in reducing car use and increasing the take up of more sustainable modes. These trends are significantly different or more marked in comparison to those seen in control areas. Large scale smarter choice programmes contribute positively to a range of objectives such as supporting economic growth, reducing carbon emissions, increasing physical activity and improving quality of life. Public support for such programmes is high, and when implemented, it has been seen that public attitudes towards sustainable travel become increasingly positive.

The financial cost of a large scale smarter choice programme is broadly £11 per year per head at today's prices. Based on the outcomes achieved in the 3 DfT funded travel towns, estimates suggest that the implied benefit-cost ratio is around 4.5 (allowing only for congestion effects). This figure could double if environmental, consumer-benefit and health effects were also taken into account. It would suggest that government investment in smarter choice measures was justified and that the implementation of large-scale programmes like these should be expanded throughout the UK.

Sources:

- *The Effects of Smarter Choices Programmes in the Sustainable travel towns (Feb 2010) – Sloman et al*
- *Darlington Sustainable Travel Town Travel Behaviour Research (Mar 2009) - Social Data & Sustrans*
- *Peterborough Sustainable Travel Town Travel Behaviour Research (Mar 2009) - Social Data & Sustrans*
- *Worcester Sustainable Travel Town Travel Behaviour Research (Mar 2009) - Social Data & Sustrans*
- *Smarter Travel Sutton Third Annual Report (Feb 2010) – Transport for London & Smarter Travel Sutton*

C. Corridor Based Physical Interventions Case Studies and Evidence

A) Improved Interchanges and Enhanced Public Realm

Transport interchanges come in many forms, from simple clusters of bus stands to major multi modal international gateways. They serve a critical role in facilitating the movement of people and goods to and from local, regional and national centres of economic and social activity. Transport interchanges constitute a natural focus for any strategy that seeks to boost accessibility and economic growth, as the benefits of improved waiting facilities, more reliable journey times, better information, ease of ticket purchase and interchange between modes are available to the greatest number of users.

They also have wider role to play as a gateways into a town, city or suburb – and as such can impact significantly on the perceptions of an area, and in turn its prospects and abilities to attract private development and investment. As such wider urban realm improvements associated with transport infrastructure are a natural extension to an interchange scheme – fulfilling the role of delivering a quality setting for the gateway, and building on the propensity for the footfall associated with the interchange to in turn attract development and investment.

The importance of urban realm is only recently coming to be fully appreciated, with the relevance of good quality public streets and places starting to be recognised as a critical factor in promoting sustainable transport, neighbourhood renewal, social inclusion, crime reduction and public health policy objectives. Additionally it is now acknowledged that the quality of living and social environments can contribute directly to higher order objectives such as community cohesion and public wellbeing.

Investment in the public realm also presents opportunities to embed sustainable transport measures within the enhanced urban setting. Informed by pedestrian and cyclist desire lines and the related need for signing, parking infrastructure and other supporting amenities.

Research by academics and practitioners, including Transport for London, has found clear positive correlations between pedestrian improvements and increases in retail footfall, and between travel by foot and total level of retail spend. While a recent Manchester-based longitudinal study[15] showed pedestrian priority schemes increasing retail footfall by 20-40%, with an increase in turnover of over 17%.

A 2005 report by CABE found that well planned and managed public realm can increase localised property prices by 5-7%. While a one point increase on the PERS (Pedestrian Environment Review System) scale was found to be equivalent to a 5.2 percent (£13,600) increase in residential prices, or 4.9 percent (£25 per square metre) on retail rents

Plymouth – Armada Way

Armada Way is a key axis of movement through Plymouth, providing a direct link from the railway station to the waterfront and Central Park. As such it is a vital thoroughfare for pedestrian flows through the city, and a gateway to the core retail and business districts. The street is approximately one mile in length and 45 metres in width.

access for pedestrians, and a safer, more pleasant streetscape that is more conducive to attracting customers. The development of the new public square has attracted a number of markets, such as Christmas and food markets, with associated increases in the number of visitors to the city centre. The square now hosts regular farmers markets, and has proven extremely popular amongst businesses and consumers.

The events each attract an estimated 100,000 people over 3 days. It is anticipated that the next stage of the development, which will include a landscaped area and pavilion, should promote more street activity and an alternative space for cultural events and performances.

[15] *Whitehead, T., Simmonds, D, and Preston, J. 2006. 'The effect of urban quality improvements on economic activity'. In Journal of Environmental Management, 80 (1), July 2006*

Southampton – London Road

A contemporary example of a successful public realm scheme in the local area can be seen on London Road, a historic gateway to Southampton city centre. It is home to around 80 businesses, mostly retail, and has an emerging café society and night-time economy, after years of decline. The road was formerly a safety hotspot, while a degraded streetscape reinforced anti-social driver behaviour, and marginalised pedestrian movement. The planned improvements placed a strong emphasis on innovative traffic management to reduce speed and improve walkability, carriageways were narrowed, kerb heights were lowered, the centre line and other superfluous road markings were removed. Parking was reorganised into discrete areas of echelon parking.

The London Road improvement scheme has had a marked impact on the way people use and appreciate the street. It has transformed a once failing space into a worthy gateway to the city. Simple lines and a clean finish give the street a sense of purpose. The well considered layout of public realm elements emphasises the mixed-use nature of the street. A series of public spaces provides a setting for new public activities to happen in the street.

Despite the economic climate, pedestrian footfall on London Road has increased. Early results suggest that both traffic speeds and the number of collisions have been reduced. A simple yet aesthetically pleasing design has been achieved without major cost in terms of materials.

B) Cycling

In recent years cycling has rapidly ascended the transport agenda, gaining increasing recognition for its capacity to tackle a range of persistent and cross-departmental issues;

- tackling congestion and promoting sustainable travel
- reducing pollution and the emissions of CO2
- improving general health, fitness and well-being

At a local scale cycling can serve as cheap and effective primary mode of travel to a place of work, retail or leisure destinations. While cycling to interchanges (such as rail or bus stations) enables longer distance car-free travel.

A key focus for cycling is safety, as whilst cycling casualties have been in decline in many areas, fear of using the roads is often cited as a reason not to cycle. Providing safer infrastructure and training for cyclists, and minimising conflict between cyclists and other road users is therefore essential. As more people cycle, safety fears are likely to be reduced, creating a virtuous circle that will lead more people to cycle.

Basingstoke Canal Towpath Improvement

The Basingstoke canal stretches from Byfleet in a westerly direction through the borough of Woking for 32 miles to Basingstoke. The towpath had become narrow and dilapidated in places, but serves as a significant green corridor within an urban area and passes adjacent to many neighbourhoods and businesses – with over 90,000 people living within 1 mile of the canal. The canal also roughly follows the alignment of the railway linking West Byfleet, Woking and Brookwood stations.

The 8 mile section through Woking was widened to 2.2m and resurfaced. Sustans carried out a usage survey in 2010, which relative to 2007, found cycling levels rose at four different locations between 75% and 213%. Walking levels rose by 89%.

Woking Town Centre – Allowing Cycling

The town centre of Woking encounters considerable severance from outlying areas, in the form of mainline rail line, major roads and the Canal – and as such accessibility is restricted. The town centre is a place where many people wish to travel to, for work, shopping and to connect to public transport for longer journeys. However, although many of the streets within the town centre are relatively wide, cycling had been restricted for many years. The recent bid to become a cycle town emphasised the need to have direct, continuous, convenient, safe and attractive routes for walking and cycling, connecting people to places, where they live to where they wish to travel to by sustainable means.

The town centre was a major barrier for continuous cycle routes and therefore the removal of restricting cycling within certain streets of the town centre was one of the targets within the project. In 2009 an Experimental Order was introduced within certain streets of the town centre allowing cycling 24 hours a day.

Alongside the relaxing of prohibitions on cycling through the town centre 166 new cycle parking spaces were installed across the town centre – an increase of 49%. Cordon counts were undertaken within the town centre from mid 2009 and by late 2010, the number of cyclists entering the town centre had grown by 63% to 1,500 (3,000 two-way). The order was made permanent in late 2010.

C) Real Time Information

Passenger expectations have risen over the last few years regarding the availability and accuracy of public transport service information as well as with the services themselves and stop/station waiting environment. One of the most significant improvements in technology relates to the introduction of Real Time Information (RTI) systems, which provide accurate departure and arrival times, enabling travellers to plan their journeys and thus make better use of their time.

RTI has been a core component in information systems for rail and air modes for many years, but it has only recently been recognised that such technology can also provide benefits for those making journeys by bus. RTI may be presented via interactive terminals and plasma displays at bus stops, stations, interchanges and major traffic generators such as shopping centres, council offices etc. The information can now also be communicated through web-based applications, SMS and Smart Phone technology. These methods of display enable RTI information to be accessible from almost any location, providing greater travel choices to a mass market.

RTI reduces perceived and actual waiting time and many consider that it also makes people feel safer. In combination with other measures such as bus priority, RTI can:

- Enhance efficiency, the environment and the economy by encouraging modal shift to public transport
- Improve accessibility and therefore reduce social exclusion

Live journey time information is usually transmitted by GPS to a central server from Automatic Vehicle Location (AVL) equipment fitted on buses. The server then sends the information to the RTI devices. AVL systems have a dual benefit in that they can also communicate with traffic signals to change the sequencing to provide priority to buses.

CENTRO Real Time Information

With many routes in the West Midlands suffering from poor bus journey reliability and with bus patronage falling, CENTRO took the decision to invest in RTI and AVL technology to improve the: efficiency of bus services, quality of information provided to bus passengers and user perception of public transport provision.

CENTRO introduced the system to provide the following wider benefits:

- Improve economic regeneration
- Improve social inclusion
- Encourage sustainable travel
- Improve safety and health
- Improve integration

Covering 90 bus routes, the CENTRO RTI is provided through 3-line stop displays, large displays at key interchanges, a map-based website and via SMS at 2000 stops.

Following user interviews conducted after the system had been introduced:

- 94% of passengers said they take advantage of the RTI facilities
- 65% said they thought the system was always or almost always accurate
- 86% said that RTI was either helpful or fairly helpful
- Passengers said they prefer RTI to printed timetables

This example demonstrates the benefits provided by RTI systems. Elsewhere in the UK, RTI has provided similar improvements to journey reliability and experience. For example, the 'Countdown' system, which has an extensive coverage across London, has shown that 65% of people now perceive a shorter waiting time, whilst 89% feel that the wait is more acceptable. 83% found that time passes more quickly and passengers waiting for buses at night feel safer. In addition to journey reliability improvements, existing UK RTI system has shown that bus patronage from RTI can improve by up to 5%.

2.8.6 Demonstrating How the Package is Coordinated, and Delivers Against the Local Objectives and Fund Criteria

This Strategic Case has presented evidence of current high levels of, and forecast increases in, car use on both the local and strategic road networks in South Hampshire. As a consequence, congestion and increased journey times will continue to constrain employment and population growth and result in negative economic and carbon implications for our area. There is, therefore, a demonstrable need for transport intervention to achieve sustainable economic growth in South Hampshire.

The majority of delays currently occur in our key urban areas on radial routes into the city centres, as well as within the city centres themselves. The largest hotspots in terms of total delay are the motorway junctions, which has negative implications for strategic movements, and impacts negatively on the economic competitiveness of our international gateways and our economic centres.

Many of the vehicles contributing to delays are making relatively short trips. Indeed, in the most densely populated areas, more than 68% of trips are less than 5km in length. The motorway network, too, is supporting a substantial proportion of short trips, with around 28% of trips on the M27 making use of one or two junctions. This localised use causes delays to longer distance and strategic movements to and from our international gateways and economic centres.

The increased demand for highway capacity is forecast to have a negative impact on bus patronage growth. Increases in incidence of delays to buses are forecast, which will act to reduce the attractiveness of the mode. By improving the efficiency, utility and attractiveness of the public transport offer in a coordinated manner, which recognises the multi-operator and multi-modal nature of local public transport provision, there is an opportunity to migrate current and forecast future short-distance car trips to public transport and active modes.

The specific locations within South Hampshire that stand out as having particularly acute transport problems across a range of measures are Southampton, Portsmouth and Gosport. These locations were also identified within section 2.2 as suffering with significant pockets of deprivation, economic inactivity and health problems. Furthermore, these are locations containing those sectors for which South Hampshire has a competitive advantage are located and so have the potential to drive forward economic and employment growth.

Using robust evidence of the current and future transport situation, we have identified the key barriers that are inhibiting progress toward our five sub-national outcomes and, in turn, identified six local objectives to which our proposals must respond.

We have identified a strong case for transport intervention targeted at:

- Improving the quality of alternative modes to the private car along key corridors – particularly between the two cities and their hinterlands and also to and from Gosport
- Encouraging mode shift from the car, targeting those short-distance trips that could be undertaken by public transport or active modes to reduce carbon, and thereby releasing highway capacity for strategic movements – particularly to our international gateways and economic centres.

In response, we have developed a coordinated and mutually-supportive package with three broad categories of intervention:

- An interoperable smart ticket for bus and ferry travel
- Area-wide and corridor-specific behavioural change interventions
- Physical interventions along nine corridors and at interchanges.

In combination, our proposals aim to raise the quality of public transport and active modes and offer genuine travel choice to ensure that the forecast significant growth in trips is accommodated in a sustainable way to enable the local economy to flourish.

Our proposals will be successful in supporting economic growth through:

- creating employment
- widening employment horizons
- widening the available labour pool
- supporting growth targets
- targeting support at our assets (e.g. our international gateways and key growth sectors
- targeting support at our sectors that have potential for growth
- realising greater mode shift
- reducing car trips
- reducing congestion
- increasing public transport patronage
- increasing use of active modes
- improving journey time reliability for all road users

Our proposals will also reduce carbon and other emissions from the transport sector, improve health, and improve access for all.

The Economic Case quantifies the benefits of our proposals in detail, but the remainder of this section draws on the same evidence as the Economic Case to demonstrate the performance of our proposals against the barriers and objectives, and in turn against the sub-national outcomes.

Creating Employment

Analysis has identified that our LSTF proposals will directly result in the creation of an additional 375 jobs (to 2019) and 763 jobs to 2026, in the local economy. This of course, does not include the support that our proposals will provide for the 56,300 new jobs that South Hampshire plans to deliver to 2026.

In addition, it is reasonable to assume that from a total package investment (DfT and Local contributions) of £31,163,000 our proposals will result in 391 new jobs, although these may not be sustainable in the longer term. This figure is based on government Input-Output tables and includes direct and indirect jobs, including the impact of construction spend filtering through the economy. Construction jobs will be created from the initial spend, whilst people in these jobs will then spend their salaries and this also creates demand/ jobs as this money filters through the economy. Also, the demand for the materials used creates jobs in supplier industries. These 'multiplier' effects are calculated to create direct construction and indirect non-construction jobs totalling 12.53 employees in the economy for every £1m spent on construction (i.e. 391 jobs from the £31.163m investment).

Discussions with transport operators have revealed that they would expect to recruit an additional 25% to their current workforce as a consequence of the forecast growth in patronage resulting from our LSTF proposals .

Estimate of Current Employees in Local Bus / Ferry Industry	Additional Employees as a Result of Patronage Growth
1,500	375

It can therefore be calculated that a total of 1,141 jobs to 2019 and 1,529 to 2026 will be created as a direct consequence of LSTF investment. It is important to note that our LSTF proposals will support the creation of the wider new jobs planned for South Hampshire, by improving the efficiency of the transport system through reduced congestion and journey times, widening the labour pool for employers, and increasing the employment horizons of the local workforce. Taking the current average Hampshire salary of £27,298 (PayScale, 06-12-11), for employment alone, this would realise a £31,147,018 (to 2019) and £41,738,642 to 2026) return on investment.

Accommodating Trip Growth through Public Transport and Active Modes

By 2026 our proposals will result in mode share for car reducing from 68% (2010) to **65%**, a 5% reduction. Over the same period, public transport mode share grows from 3.8% to **4.7%** (a 24% increase) and the mode share of active modes grows from 28% to **31%** (a 9% increase). This is shown in *figure 2.42*.

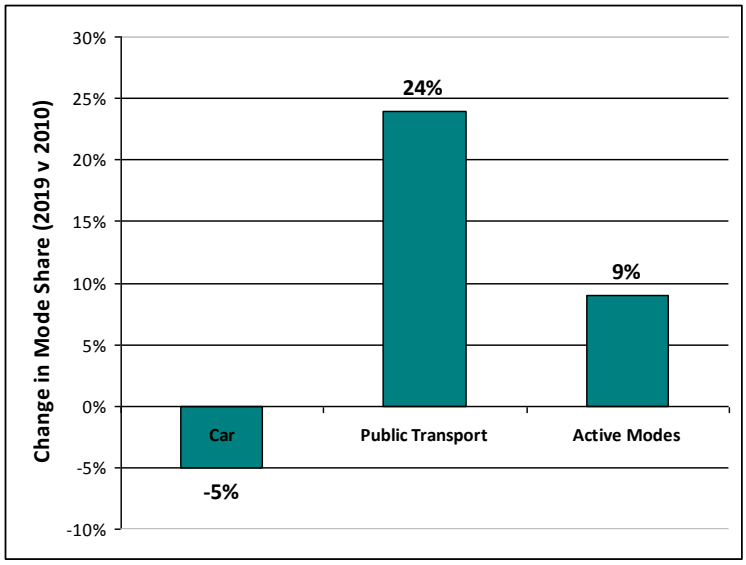


Figure 2.42: Change in Daily Mode Share in 2019 as a Consequence of LSTF Proposals

In accordance with our focus, by facilitating mode shift and reducing short car trips, our proposals will provide significant benefits for all highway users. Each day there will be 89,000 fewer person trips on the highway network (12 hour period) and an increase of 22,000 public transport person trips and nearly 62,000 active mode trips. This is shown in *figure 2.43.*

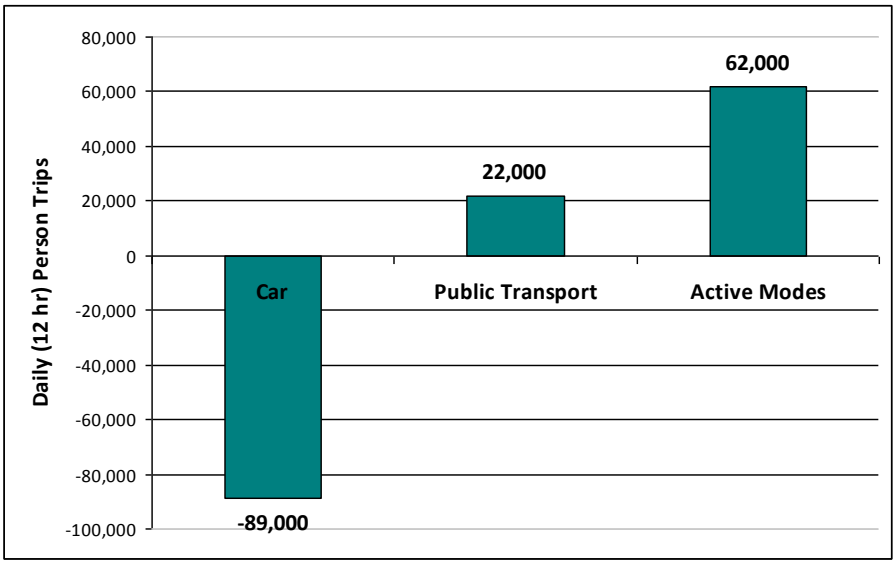


Figure 2.43: Change in Daily (12 hour) Person Trips as a Consequence of LSTF Proposals

Our proposals have sought to target the large number of short-distance car trips that take place in South Hampshire for migration to public transport and active modes. The impact of our proposals in reducing the number of short distance car trips is demonstrated in *Figure 3.4* in the Economic Case.

Our proposals deliver significant travel time benefits for business users across public transport and car / LGV modes. Business users of public transport will realise present value travel time savings over 30 years of £56.0m, savings to business cars and LGVs will be £15.7m, whilst savings to goods vehicles will be £7.0m. Overall, the benefits to business users sum to £78.3m.

The nine corridors that we have targeted represent the key commuting corridors into our economic centres. For commuters there are large travel time benefits for public transport users (£27.8m) as well as for commuters using private cars and LGVs (£11.4m).

The evidence shows that our proposals deliver mode shift from the private car to public transport and active modes and at the same time improve travel conditions for economic trips, thereby improving business operating conditions within South Hampshire.

Looking more widely, overall, the benefits to non-business users amount to £74.6m and it is clear that the measures to reduce congestion through modal shift and creating a more efficient highway network have a positive impact on people's journey times, both for private car users and users of public transport.

Supporting Our Assets and Growth Sectors

The change in the macroeconomic situation has reduced the scale of likely future economic growth in South Hampshire. The Economic Development Strategy for the area, in response, has identified a preferred growth scenario to improve on the baseline position, with a need to focus on our sectoral strengths, maximising use of our assets, and enabling our cities to fulfil their economic potential. Our corridor based approach has been developed to support these areas of focus. The key period of effort needs to be from 2011 to 2015, to increase the GVA growth rate, and set South Hampshire on a preferred growth trajectory (Figure 2.4). This matches the period of our LSTF proposals.

Particular opportunities exist around a number of key sectors that tend to locate in our cities. For example, the Business and Financial Services is identified as a high volume employment growth sector, which tends to locate in the cities. The Enterprise Zone at Daedalus presents and opportunity too, with 650 jobs to be created by 2015 and up to 3,700 jobs on the EZ by 2026. Our focus on improving access to and within the cities and the Gosport peninsula through our corridor approach supports these opportunities.

The EZ at Daedalus has presented a particular opportunity. Targeting interventions at improving sustainable connections between Daedalus and the appropriately-skilled workforce in Gosport provides the opportunity to internalise transport movements and so reduce the significant congestion issues on the access routes onto the peninsula. Not only will our proposals improve the accessibility of the EZ to local employees, but will subsequently reduce worsening congestion, reduce the transport costs associated with locating and working at the EZ, and so improve the attractiveness of the EZ as a location for new business.

To achieve the preferred growth scenario and the Solent LEP objectives, there is a need for investment from all partners to be aligned to ensure maximum efficiency of impact. Our proposals seek to do this.

Reducing Carbon and Improving Air Quality

The Economic Case analysis of our proposals shows that the full LSTF package has a positive impact on carbon emissions with reductions of 25,750 tonnes per annum emitted compared to the reference case.

As can be seen by comparing *map 2.7* (which shows the AQMAs in South Hampshire with *map 2.15* (which shows our nine corridors), our corridors include all AQMAs in South Hampshire. The Economic Case shows that our proposals deliver reductions to Nitrogen Oxide, PM10, Hydro-Carbon, and Carbon Monoxide emissions.

A Mutually Supportive Package

The three broad components of our proposals have not been designed, and are not intended, to be delivered in isolation, but rather to complement each other and form part of a mutually supportive package. This has been demonstrated in the corridor descriptions and quantified within the Economic Case.

The smart card will make using public transport easier, whilst also speeding up boarding. However, without improvements to journey time predictability, reliability, and clear information, mode shift to public transport would be reduced. This is why the interventions along the nine corridors as well as the area-wide behavioural change measures are required to maximise benefits, in a coordinated manner. This can be demonstrated by the full package delivering a BCR of 8.5, whilst the removal of the behavioural change measures has the impact of reducing the BCR to 6.1. The NPV for the corridors only is £136m, which increases to £253m for the full package.

Our proposals seek to deliver a truly integrated local sustainable transport offer in South Hampshire. An example of this has been demonstrated in our proposals for Corridor 1 – Hythe to Southampton City Centre – where improvements to walking and cycling infrastructure to access the bus/ferry interchange in Hythe will be delivered. When people arrive at the bus/ferry interchange they will see live bus and rail departure information for onward travel from Southampton. On arrival at Town Quay in Southampton, onward travel will be facilitated through improved legibility, further real time information and the availability of the existing privately funded free shuttle bus to West Quay Shopping Mall and Southampton Central Rail Station. In this way we are building on existing provision and assets to improve the public transport and active mode offer. Likewise, on Corridor 9 – Havant to Portsmouth City Centre – similar improvements are planned to better connect the rail station with the bus station, to better integrate what exists already.

The benefits of the existing Phase 1 of Bus Rapid Transit (BRT) connecting Gosport and Fareham, in corridor 7 are multiplied by investing further in bus infrastructure improvements at key interchange locations around Gosport, reinforcing the step-change in bus quality and reliability being delivered through BRT.

The behaviour change programme will, in general, follow the roll out of specific physical interventions and improvements along the nine corridors. For example, BRT will be promoted through the use of Personal Journey Planning techniques whereby information and advice about BRT will be provided directly to householders. Looking more generally, the measures along the corridors will be drawn together though a consistent marketing strategy, using the same messages, brand, calls to action and styles throughout. By using the same style on all materials and as part of the publicity when the physical interventions are being introduced it will reinforce the purpose of the programme and enable residents to both understand and experience the improved local transport network.

Stakeholder Support for Proposals

There is a strong track record of Partnership working in South Hampshire across spatial, economic and transport planning. TfSH and PUSH work closely together in a mutually supportive way. The emergence of the Solent LEP has complimented this partnership working, bringing in business expertise into the strategic planning process. With a Solent LEP Business Board Member on the TfSH Joint Committee, the role of the Solent LEP in strategic transport planning and delivery is imbedded. PUSH and the Solent LEP are supportive of the proposals, as demonstrated in their letters of support, provided in Appendix 2.6.

"The Solent LEP Board has been impressed by the proposals TfSH has developed for funding through the LSTF. In particular, the alignment of proposals with the sustainable economic growth ambitions we have set ourselves is evidence of the public sector supporting the private sector to realise mutual outcomes. I am delighted to offer the full support of the Solent LEP Board for the proposals."

Doug Morrison, Chairman, Solent LEP Board & Port Director, ABP Southampton

Engagement with SHBOA has been particularly helpful in developing these proposals. Not only are the bus operators committing significant financial resource to our proposals, but they have been fully involved in the proposals for the delivery of the smart card scheme.

"SHBOA has had a full and active role in the development of this TfSH Business Case and is therefore delighted to confirm support for these proposals. The forecast constraints on the highway network and their impact on bus travel paint a worrying future for bus and wider public transport provision in South Hampshire. The TfSH proposals are critical to ensuring that public transport plays a significant role in supporting sustainable economic growth in South Hampshire."

Andrew Dyer, Chairman of SHBOA & Managing Director of Stagecoach South

As described in section 2.7, the role of a Steering Group, including representation from business, academia, Sustrans, and transport operators, was integral to the development of our proposals. Furthermore, a wide spectrum of stakeholders (from across a range of sectors, including transport, business, academia, health care, and local government) have validated the problems, and assisted in the generation of solutions through workshop events - as described in Section 2.7.

Letters of support for this Business Case are provided in Appendix 2.6.

Fit With Local Objectives and the Fund Criteria

Performance of our proposed LSTF package of measures, at the whole package scale, is presented in figure 2.44, and shows that through our package, we will tackle 21 of the 28 barriers we have identified as inhibiting progress toward the sub-national outcomes.

Figure 2.44: Mapping Impact of Solutions on Mitigating Transport Barriers to Realise the Local Outcomes

Figure 2.44: Mapping the Impact of Solutions on Mitigating Transport Barriers to Realise the Local Outcomes

SUB-NATIONAL OUTCOMES

O1 – Strengthened international gateways in the sub-region, fulfilling their role in supporting the local and national economy.

O2 - Delivering planned housing and employment growth through regenerating existing economic centres first

O3 - The transport sector contributing to South Hampshire achieving its commitment to reduce greenhouse gas emissions (especially Carbon).

O4 - Reduced social disparities, supporting cohesive and inclusive communities and improving the quality of life for South Hampshire residents.

O5 - Delivering continuous economic growth through the implementation of the strategic and major development areas that will ultimately deliver housing and employment targets.

BARRIERS

- B1 - low containment in new developments outside existing urban areas, leading to longer and less sustainable commuting distances
- B2 – limited employment opportunities in Gosport leading to out-commuting
- B3 – high levels of car dependence for journeys outside of cities and Gosport
- B4 – South Hampshire operating as two separate journey to work areas
- B5 – areas of deprivation have poorer than average access to jobs by public transport
- B6 – out of town areas have more limited employment catchments and can be significant less accessible by public transport
- B7 - forecast growth at ports will increase pressure on transport network and may not be realised if capacity not available
- B8 – mode shift projections for freight traffic may not be realised if insufficient incentive available to switch
- B9 - absence of direct rail links to the airport from the east discourages use of public transport
- B10 – risk of flooding is a constraint on types of interventions that can be incorporated into LTSIP
- B11 – M27 forecast to be operating above capacity, particularly in vicinity of North Fareham SDA
- B12 – urban motorways form physical barriers to movement by active modes from a number of locations
- B13 – current and increasing levels of delay on M27 in vicinity of Southampton
- B14 – delays along key corridors in Southampton may stifle growth of economy
- B15 – delays caused by congestion on M27 adversely affect east to west movements
- B16 – high out-commuting from Gosport contributes to significant delay along A32 and in Fareham
- B17 – congestion on links to Portsmouth Island and around Portsmouth city centre will potentially constrain access to the port and new developments
- B18 - increase delay at M3 junctions in Winchester area adversely affecting freight movements
- B19 – inefficient use of South Hampshire road network for trips that could be made by active modes or public transport
- B20 – capacity constraints on rail to London mean there is limited capacity for further growth
- B21 – number of rail infrastructure limitations currently prevent operation of rail services from Southampton Airport Parkway to the east TfSH area
- B22 – slow and infrequent train services between Portsmouth and Southampton contribute to the low levels of interaction
- B23 – commercial nature of bus services means that it is uncertain whether or not optimum use of BRT investment will be made for TfSH area
- B24 – optimal benefit from BRT investment will not be realised if it is not developed as part of a high quality, integrated transport offer
- B25 – bus journey times are forecast to increase as a result of congestion
- B26 – increasing transport costs caused by demand exceeding available capacity is forecast to limit uptake of permissible sites for development
- B27 – forecast increases in traffic volumes will mean that carbon emissions from TfSH area increase in real terms
- B28 - High levels of inactivity and obesity in some areas of South Hampshire contribute to a poorer quality of life and have a detrimental effect on the South Hampshire economy.

OBJECTIVES

Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity

Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion

Improve sustainable access linking people to jobs and key facilities in our cities and towns

Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres

Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres

Improve levels of physical activity, health and wellbeing through increased active travel

TfSH Joint Large Project Package:

Inter-operable Smart Card.

Improvements along 9 public transport corridors and at interchanges.

Targeted behaviour change interventions along 9 public transport corridors.

BARRIERS

- B1 - low containment in new developments outside existing urban areas, leading to longer and less sustainable commuting distances
- B2 – limited employment opportunities in Gosport leading to out-commuting
- B3 – high levels of car dependence for journeys outside of cities and Gosport
- B4 – South Hampshire operating as two separate journey to work areas
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- B27 – forecast increases in traffic volumes will mean that carbon emissions from TfSH area increase in real terms
- B28 - High levels of inactivity and obesity in some areas of South Hampshire contribute to a poorer quality of life and have a detrimental effect on the South Hampshire economy.

Unlocking the outcomes through targeting LSTF proposals at barriers

Looking at the performance in some more detail, *table 2.15* shows the performance of our proposals against our local objectives – against which there is an excellent fit.

Local Objective	**Smart Ticketing & Media**	**Area-wide Behavioural Change**	**Proposals for 9 Corridors**
Enable higher levels of economic growth by improving local employment opportunities, deepening the labour market and therefore increasing productivity	✓	✓	✓
Enhance business performance particularly at the international gateways, by increasing the efficiency of the transport network and managing congestion	✓	✓	✓
Improve sustainable access linking people to jobs and key facilities in our cities and towns	✓	✓	✓
Reduce emissions (particularly carbon) from the transport sector by reducing highway vehicle kilometres	✓	✓	✓
Reduce unemployment in areas of high deprivation through improved sustainable access to employment centres	✓	✓	✓
Improve levels of physical activity, health and wellbeing through increased active travel	✓	✓	✓

Table 2.15: Performance of Proposals Against Local Objectives

Our proposals also provide an excellent fit with the LSTF criteria at the whole package scale. This is presented in *table 2.16.* This demonstrates that all of the LSTF criteria are achieved by our proposals.

	LSTF Criteria	Smart Ticketing & Media	Area-wide Behavioural Change	Proposals for 9 Corridors
Core Objectives	Support local economy and facilitate economic development	✓	✓	✓
	Reducing carbon emissions	✓	✓	✓
Core Criteria	Value for Money	✓	✓	✓
	Financially sustainable	✓	✓	✓
	Deliverable	✓	✓	✓
	Affordable & Realistic	✓	✓	✓
	Local Contribution	✓		✓
Additional Objectives	Wider social and economic benefits	✓	✓	✓
	Improved safety			✓
	Environmental improvements	✓	✓	✓
	Increase levels of physical activity and health benefits		✓	✓
	Support from a range of community interests	✓	✓	✓
	Incorporate Partnership Working	✓	✓	✓

Table 2.16: Performance of Proposals Against LSTF Criteria

Our proposals also support the government commitment within the current Local Transport White Paper (Creating Growth, Cutting Carbon), which states: *"improving end-to-end journeys by enabling most public transport journeys to be undertaken with a smart ticket by December 2014".*

03 Economic Case

3.1 Introduction

3.1.1 The Transport for South Hampshire Economic Case is carried out in line with the LSTF Supplementary Guidance. The aim is to provide an assessment of the various impacts generated by the package of measures submitted for LSTF funding and demonstrate these offer value for money in the use of scarce public sector resources and taxpayers' money. The analysis to support the Case has been carried out in accordance with the Department's WebTAG Guidance, noting the LSTF Supplementary Guidance and taking a proportionate approach to appraisal as suggested. The impacts assessed include those on the economy, environment and social impacts as well as other criteria important to the Department. The analysis is not limited to monetised impacts but also includes those that are assessed qualitatively and quantitatively.

3.1.2 Details of the package of measures (smart ticketing, behavioural change measures and physical interventions in the nine corridors) have been included in the Strategic Case. In addition, the Strategic Case also includes details of the initial appraisal, such as how the long list of interventions was reduced to a short list using an Early Assessment and Sifting Tool (EAST) type analysis to ensure the options performed well against a range of measures eg scheme specific objectives, wider objectives, affordability, public acceptability, the five criteria of economy, environment, safety, integration and accessibility etc. To avoid duplication and repetition, details of the proposed interventions and results of the initial appraisal are not included here and reference should be made to the Strategic Case for information.

3.1.3 Following the Initial Appraisal, the main purpose of the Economic Case is to present the results of the detailed appraisal of the remaining options. The aim is to show how the overall package of measures contributes to the two core strategic objectives of the LSTF ie on economic development and carbon reduction, as well as how they perform against the other WebTAG appraisal criteria, including value for money. While the focus of this chapter will be on the package of measures as a whole, findings of the individual options can be found in Appendix 3.3. These findings demonstrate how each strand of interventions contributes to the performance and value for money of the overall package of measures.

3.2 Checklist

The LSTF Supplementary Guidance explains that the Economic Case should include a checklist at the beginning, referencing each item with the relevant page / annex number. The Checklist is included below.

3.2.1 Cost Benefit Analysis

Item	Page no.
Assumptions Note - a clear explanation of the underlying assumptions used in the Cost Benefit Analysis.	In Assumptions Note (Appendix 3.4)
Information on local factors used. For example the derivation of growth factors, M factors in COBA and annualisation factors in TUBA (to include full details of any calculations).	In Assumptions Note (Appendix 3.4)
A diagram of the network (if COBA used).	
Information on the number of junctions modelled (if COBA used), for both the do-minimum and the do-something.	
Details of assumptions about operating costs and commercial viability (e.g. public transport, park and ride, etc.).	In Assumptions Note (Appendix 3.4)
Full appraisal inputs/outputs (when used, COBA and/or TUBA input and output files should be supplied).	In Assumptions Note (Appendix 3.4)
Evidence that TUBA/COBA warning messages have been checked and found to be acceptable.	
Spacial (sectoral) analysis of TEE benefits	See Figures 3.8, 3.9 & 3.10
Details of the maintenance delay costs/savings.	Not applicable, given nature of proposed interventions
Details of any delays during construction.	Not applicable, given nature of proposed interventions

3.2.2 Economic Case Assessment

Item	Page no.
Assessment of Environmental impacts, to include an environmental constraints map.	Section 3.5
Assessment of Safety impacts and the assumed accident rates presented (COBA output should be provided if an accident only COBA has been run).	Section 3.6.3
Assessment of Economic impacts.	Section 3.4
Assessment of Accessibility impacts.	Section 3.6
Assessment of Integration impacts.	Section 3.6
A comprehensive Appraisal Summary Table.	Appendix 3.1
TEE table	Appendix 3.2
AMCB table	Section 3.7.3
Public Accounts (PA) table	Section 3.7.4

3.2.3 Modelling

Item		Page no.
An Existing Data and Traffic Surveys Report to include:		**Appendix 3.5**
	Details of the sources, locations (illustrated on a map), methods of collection, dates, days of week, durations, sample factors, estimation of accuracy, etc.	
	Details of any specialist surveys (e.g. stated preference).	
	Traffic and passenger flows; including daily, hourly and seasonal profiles, including details by vehicle class where appropriate.	
	Journey times by mode, including variability if appropriate.	
	Details of the pattern and scale of traffic delays and queues.	
	Desire line diagrams for important parts of the network.	
	Diagrams of existing traffic flows, both in the immediate corridor and other relevant corridors.	
An Assignment Model Validation Report to include:		**Appendices 3.6 & 3.7**
	Description of the road traffic and public transport passenger assignment model development, including model network and zone plans, details of treatment of congestion on the road system and crowding on the public transport system.	
	Description of the data used in model building and validation with a clear distinction made for any independent validation data.	
	Details of the trip matrix building process, including details of how observed data were factored and merged and how synthetic estimates have been developed and used.	
	Evidence of the validity of the networks employed, including range checks, link length checks, and route choice evidence.	
	Details of the segmentation used, including the rationale for that chosen.	
	Validation of the trip matrices, including estimation of measurement and sample errors.	
	Details of any 'matrix estimation' techniques used and evidence of the effect of the estimation process on the scale and pattern of the base travel matrices.	
	Validation of the trip assignment, including comparisons of flows (on links and across screenlines/cordons) and, for road traffic models, turning movements at key junctions.	
	Journey time validation, including, for road traffic models, checks on queue pattern and magnitudes of delays/queues.	
	Detail of the assignment convergence.	
	Present year validation if the model is more than 5 years old.	

3.3 Model Used

This section provides a summary of the model used to support the Economic Case, as requested in the LSTF Supplementary Guidance. Full details are included in the Model Validation Report in Appendices 3.6 & 3.7.

The Transport for South Hampshire Sub-regional Transport Model (SRTM) modelling suite is an evidence-based land-use and transport interaction model developed to provide a strong analytical basis for the development of coherent, objective-led implementation plans to enable the changes in transport provision required to deliver prosperity to the area.

The integrated forecasting approach contains a suite of transport models and an associated Local Economic Impact Model (LEIM). The toolkit has been developed to assist in the ongoing investigation, appraisal and assessment of different: policies; strategies; and infrastructure, management and operational interventions on land-use policies and transport provision.

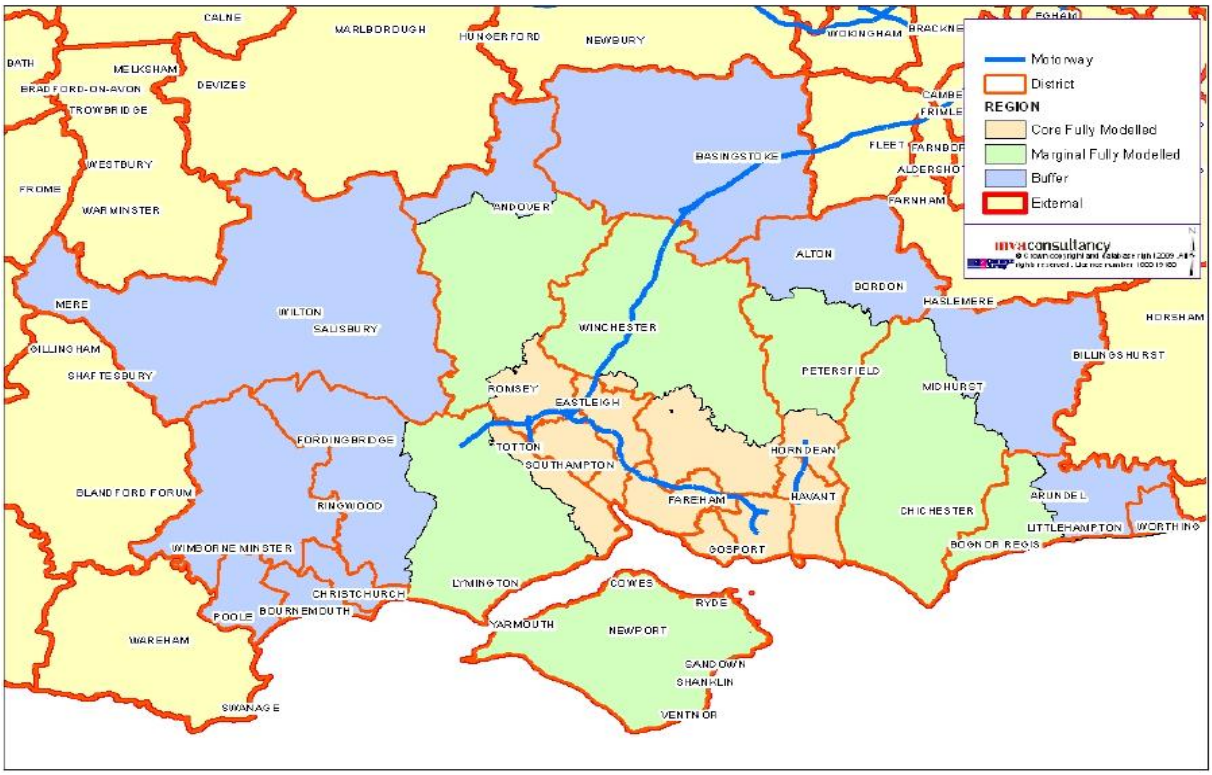


Figure 3.1: SRTM Modelled Area Definitions

The main TfSH area (shown in orange in the figure above) contains the detailed network models, and this area, combined with the surrounding area (shown in green), is covered by LEIM.

The Local Economic Impact Model forecasts:

- The supply of housing
- The number of households by type
- The population by person types
- The number of jobs by sector
- The amount of commercial floorspace

The forecasts are produced for each year of the forecast period (2011 – 2041), and are affected by a range of factors, including, importantly, the performance of the transport network which is input for the years 2014, 2019, 20126 and 2036.

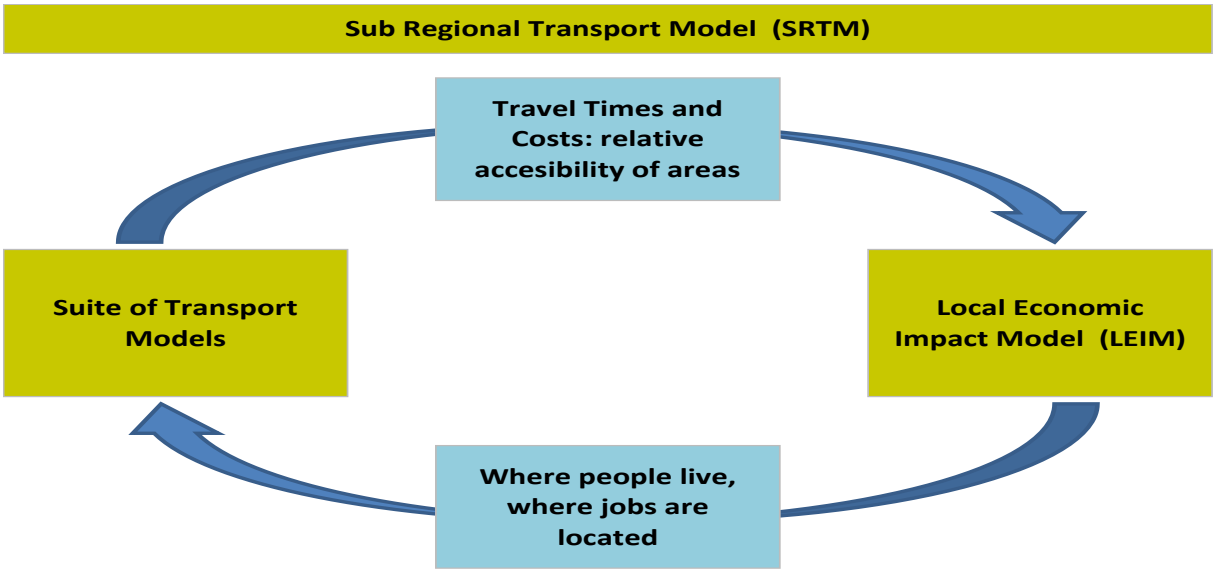


Figure 3.2: SRTM Transport and Land Use Mode Interaction

The changes in the supply of housing and employment floorspace are controlled in line with local planning policies and national figures in TEMPRO 6.2. Planning assumptions on permissible development were collected from the relevant local planning authorities and they cover the period up to 2026. For the period beyond 2026 LEIM assumes a greater intensification of use at existing sites only.

The overall growth of South Hampshire can be allowed to vary within constraints set by the TEMPRO data at a sector level, to test the impact of transport and planning policies, or it can be fixed to test the consequences of higher or lower levels of growth.

The outputs of the LEIM are used by the transport models to predict the demand for travel to and from areas within South Hampshire and these can be compared to assess the land-use/economic impacts of different planning and transport policies.

The models are set up for a base year of 2010 with forecast scenarios for 2014, 2019, 2026 & 2036. The transport models represent travel conditions for the morning and evening peak periods and the inter-peak period. They estimate the changing patterns of travel separately for travellers undertaking journeys for different purposes (eg for commuting or for education-related journeys) and for light and heavy goods vehicles.

The suite of transport models comprises the Main Demand Model (MDM), the Gateway Demand Model (GDM), Road Traffic Model (RTM) and Public Transport Model (PTM). *Figure 3.3* shows the interaction of the various models within the SRTM.

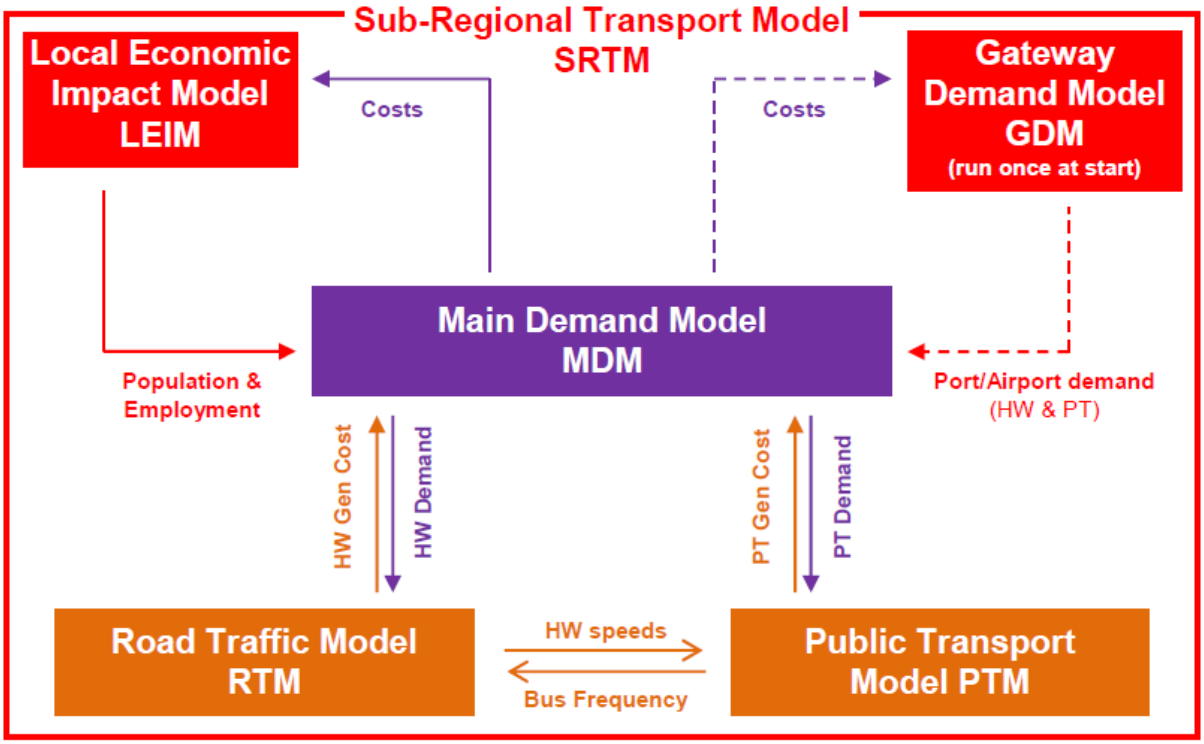


Figure 3.3: Interaction of models within the SRTM

One notable aspect of the MDM is that it uses tours to define journeys throughout the day rather than the usual trips (one tour would be the journey to work in the morning and back again in the evening; this would be two separate and unlinked trips in other models). A full description of SRTM and LEIM is provided in the Model Report in Appendices 3.6 & 3.7.

3.3.2 How the reference cases are derived and what they tell us (spread and quantum of development)

For each forecast year a set of tests was undertaken:

- Base Case - LEIM forecasts of travel demand using base year transport costs
- Reference Case – LEIM forecasts of travel demand using that year's transport costs incorporating only committed schemes

The Reference Case forecasts of population and employment are lower than the Base Case projections due to the constraints generated by the inefficiencies of the transport network ie overall costs of travel (time and money) will be higher. The aim of the interventions in the LSTF bid, and also the LTSIP, is to increase the levels of development, especially employment, back up to the Base Case levels by removing many of the barriers and constraints evident in the reference case. The impacts of these interventions are discussed in the following sections of this Economic Case.

In supporting the Economic Case, the SRTM was used to support a wide-ranging set of interventions across the TfSH area, including:

- Forecasting changes in travel demand, road traffic, public transport patronage and active mode (walking and cycling) use over time as a result of changing economic conditions, land-use policies and development, and transport improvement and interventions
- Testing the impacts of land-use and transport policies, strategies, and individual transport interventions in the increased detail necessary for preparing the LSTF submission.

3.4 Economic Case Results/Findings

This section provides the main focus of the Economic Case. It begins with a general discussion of the results of the analysis, which briefly touches on the headlines from the Transport Economic Efficiency (TEE), Analysis of Monetised Costs and Benefits (AMCB) and Public Accounts (PA) tables. The discussion then follows the structure of the Appraisal Summary Table and sets out the findings, in terms of cost and benefit impacts and general performance, against the various headings under economy, environment and social criteria. The final section provides tables, together with a short narrative, on the monetised costs and benefits and impacts on the public accounts. A full TEE table and completed AST for the overall package are included in Appendices 3.2 & 3.1 to this note respectively.

3.4.2 General

As the Strategic Case explained, the proposed package of measures focuses on three key themes. These are: a package of physical interventions along 9 corridors in the TfSH area; the introduction of an area-wide smart ticketing scheme; and a range of measures aimed at making changes to people's travel behaviour to encourage more sustainable forms of travel.

For the Economic Case, each of these measures has been assessed independently, in terms of running TUBA and generating Transport Economic Efficiency results. Indeed, the packages of physical interventions have also been assessed for each of the nine corridors. While the results are available for all of the options, they are presented here for the package as a whole, with reference to the results of the sub-packages and individual corridor options wherever necessary and to provide evidence, for example, of the impacts against the various criteria. Individual results are available however in Appendix 3.3.

In general, the analysis of the monetised costs and benefits reveals that the proposed package of measures as a whole generates a benefit cost ratio (BCR) of **8.5**. In addition, the Net Present Value of the impacts sums to **£253m**. Both results show that, in terms of the monetised impacts, the benefits significantly outweigh the costs and offer value for money for the tax payer. In addition, the package results in a 5% reduction in car trips, a 24% increase in public transport trips and a 9% increase in active modes across the TfSH area by 2026.

In generating the overall results, it is important to consider the impact of adding incremental packages. The headline results are included in *Table 3.1* below.

Package	Benefit Cost Ratio (BCR)	Net Present Value (NPV)	Present Value of Benefits (PVB)	Present Value of Costs (PVC)
All Corridors (physical interventions only)	10.5	£136m	£150m	£14m
All Corridors, plus Smart Ticketing	6.1	£146m	£175m	£29m
All Corridors, plus Smart Ticketing and Behavioural Change Measures ie Whole Package	**8.5**	**£253m**	**£287m**	**£34m**

Table 3.1 Headline Results of Economic Appraisal on Incremental Packages

As a first step, the performance of implementing physical interventions along the nine corridors was calculated, including the area-wide RTI measures. In *Table 3.1* the results of the analysis show that the BCR for the package of physical interventions in the corridors is 10.5, with a NPV of £136m. The following test involved the inclusion of the smart ticketing scheme. In this case the physical interventions plus smart ticketing generated a BCR of 6.1. The NPV for this option is £146m.

In terms of the headline BCR and NPV figures for the whole package, it is clear that a key driver is the package of behavioural change measures. As acknowledged by DfT, the approach to modelling and appraising behavioural change measures is not particularly straightforward. We have adopted an evidence-based approach, using local data where possible. Initially we conducted a literature review to establish the impact of different behavioural change measures reported in both the UK and Europe. There was a particular focus on collecting local data on the impacts of existing, similar initiatives such as school and workplace travel plans. A summary of this review is provided in Appendix 3.8.

Using this information we built up a series of assumptions about the likely behavioural change elements of the package. As the scale of change varies between intervention type and location we targeted the relevant level of impact at different journey types and zones. For example, the impacts of a workplace travel plan at a particular business location were coded into the model for home to business trips in the affected zones only. More detail on the assumptions used can be found in Appendix 3.4.

As a sense check to this approach we also ran a sensitivity test with a 3% blanket reduction in highway demand. This is based on the scale of change achieved through integrated smarter travel programmes such as the Sustainable Travel Demonstration

Towns and Smarter Travel Sutton. However, given the targeted nature of this LSTF package and the variation in impact of different interventions, it was agreed that the bottom-up approach of different impacts for different interventions and trip types is more appropriate.

Table 3.1 shows that including the behavioural change measures to the corridors and the smart ticketing option generates a BCR of 8.5 and NPV of £253m for the whole package. Overall, we are seeing a more significant impact from the LSTF package when the behavioural change interventions are included. This is in line with evidence from other behavioural change programmes (see Appendix 3.8), which suggests that this scale of change is possible with targeted and sustained investment, particularly when coupled with improvements in infrastructure as it is here.

The results that follow are therefore based on the package as a whole, with the outputs from the analysis of the other options and model runs included in Appendix 3.3.

It should be noted that in addition to the monetised impacts there are other qualitative and quantitative impacts which should be included to determine the overall results of the appraisal and value for money. These include social impacts, such as those on accessibility, and many of these are discussed in the commentary below.

Applying the whole package has positive impacts in terms of mode shift and a reduction in highway demand, compared to the reference case. By 2026 mode share for car is forecast to be **65%**, compared to 68% in the reference case, a 5% reduction. At the same time, public transport mode share with the LSTF package is **4.7%** compared to 3.8% (a 24% increase) and the mode share of active modes grows from 28% to **31%** (a 9% increase).

This is equivalent to nearly **89,000** fewer person trips on the highway network over a 12 hour period and an increase of around **22,000** public transport person trips and over **62,000** walking and cycling trips over the same time period.

The above figures are based on those trips occurring within the TfSH core area only.

The full package also has a positive impact on the number of short trips being undertaken in the TfSH area. The Strategic Case highlighted the high proportion of trips currently on the highway network that are 5km or less. *Figure 3.4* below shows the percentage change in these highway trips as a result of implementing the LSTF package, indicating the positive reduction in the percentage of person trips on the highway that are under 5km and the greatest change as a result of the LSTF package occurring in the Portsmouth corridors.

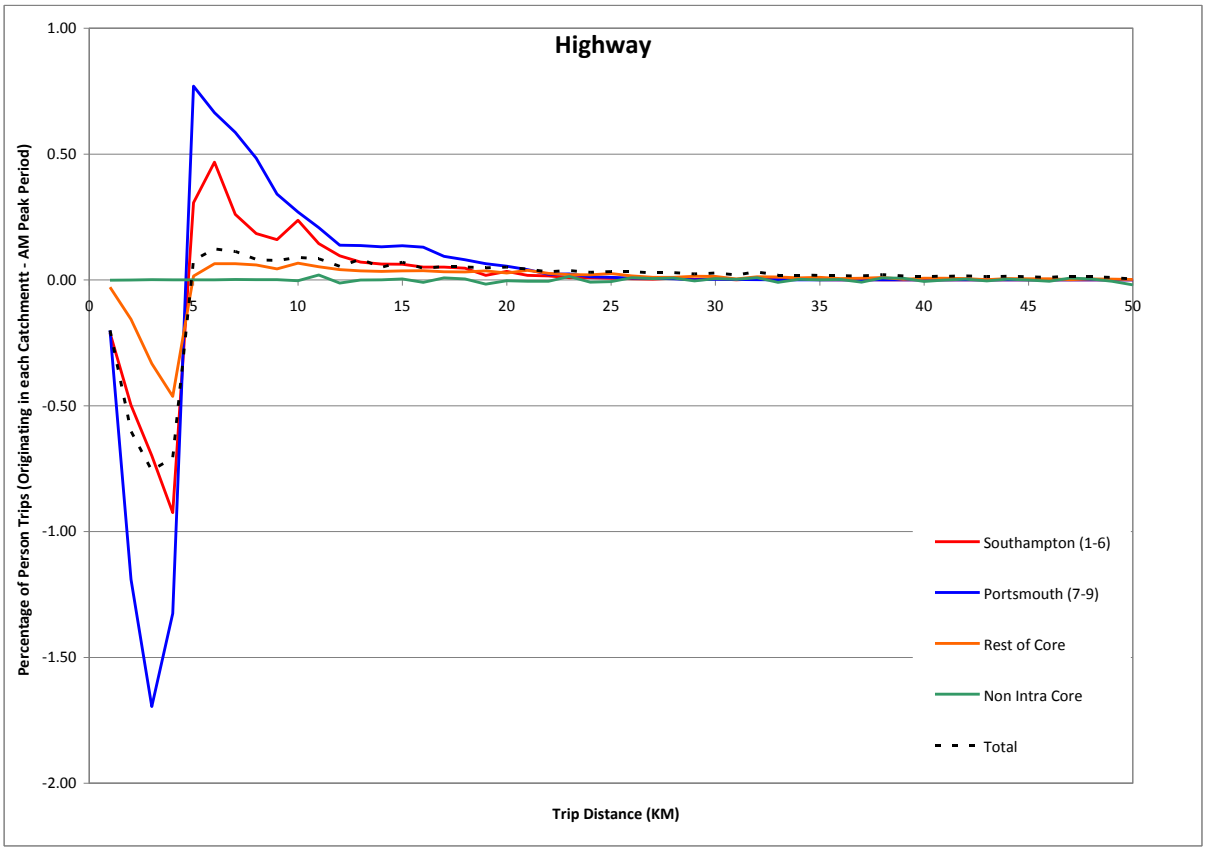


Figure 3.4: Impact of LSTF Package on Highway Trip Length Distribution (2019)

Breaking this down further, *Figures 3.5 & 3.6* show the impact of the package on trip distributions in Portsmouth and Southampton. In these figures, the dotted lines represent the impact of the LSTF package. It is clear from these graphs that, due to the interventions, there will be a reduction in the number of short trips being undertaken on the highway and also a corresponding increase in person trips being undertaken by active modes and public transport in both the Southampton and Portsmouth Corridors.

Figure 3.6 shows particular benefits in terms of reduced short highway trips in Portsmouth.

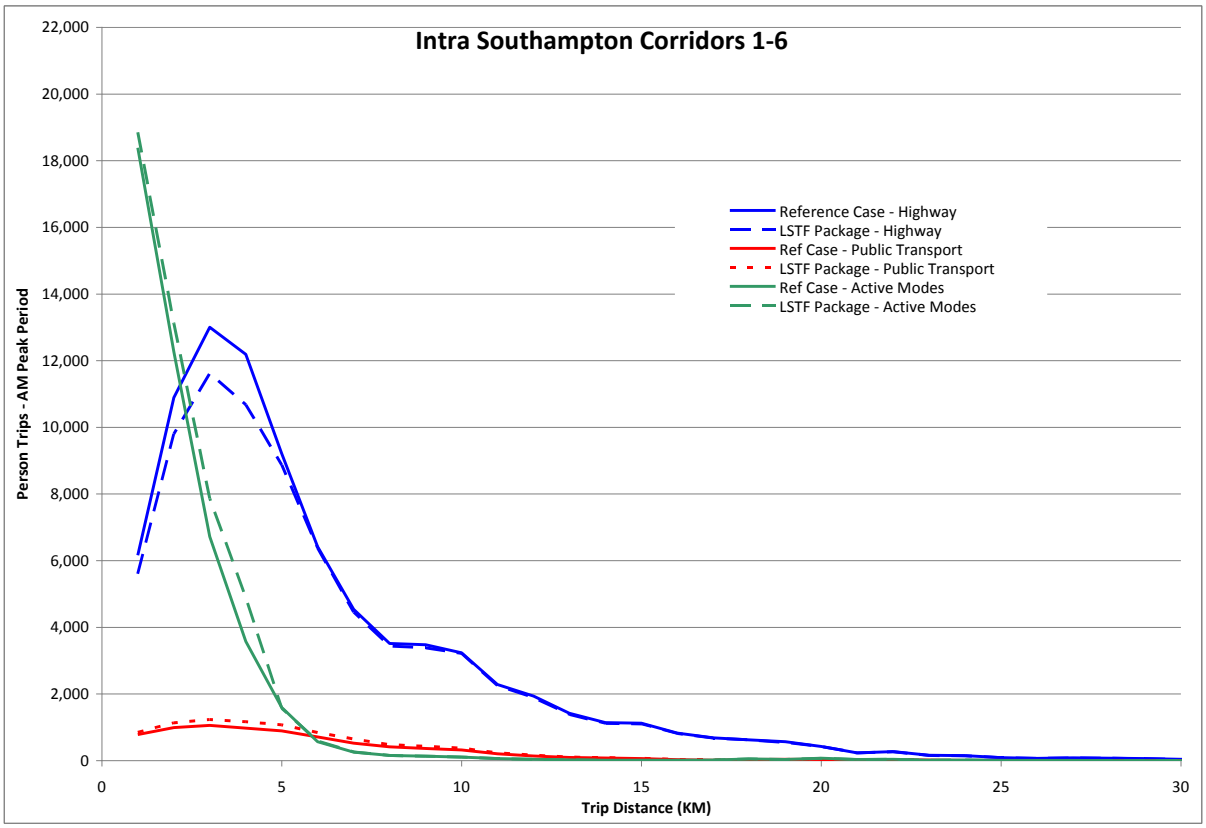


Figure 3.5: Impact of LSTF Package on Trip Length Distribution in Southampton (2019)

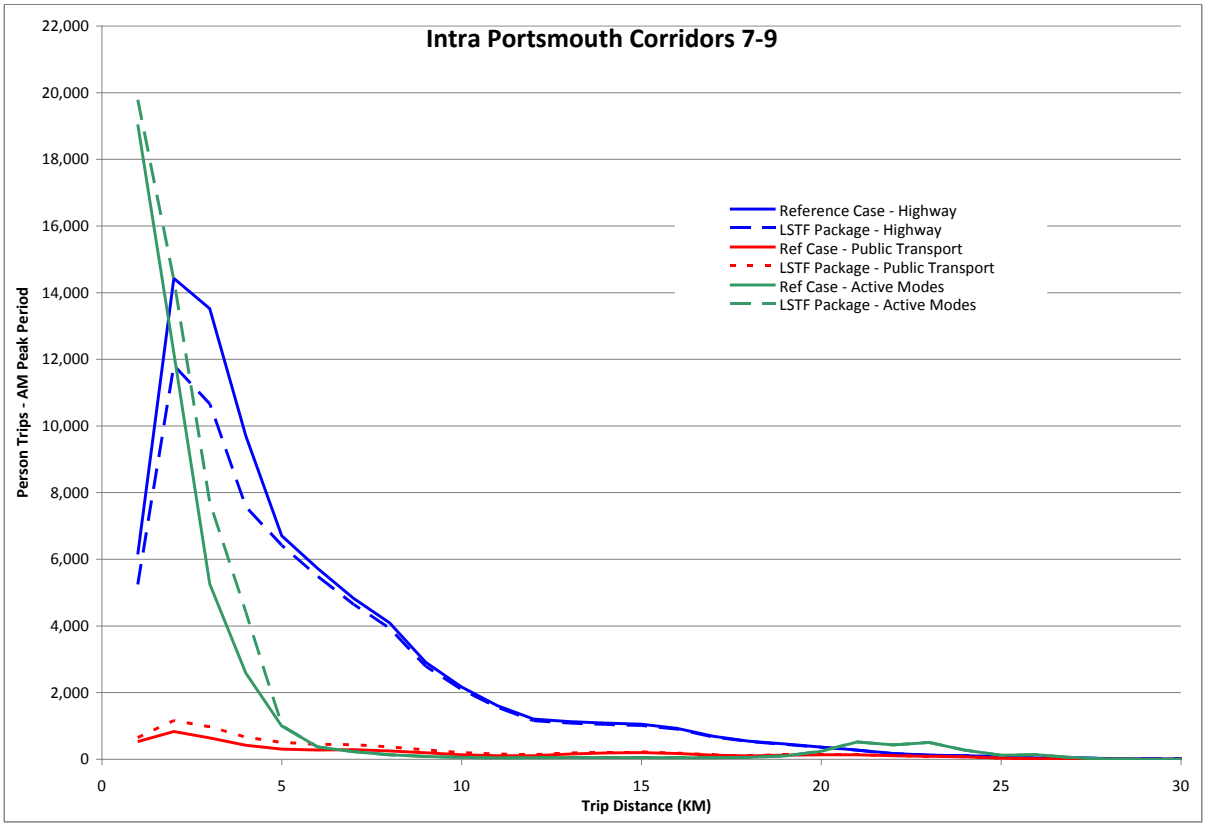


Figure 3.6: Impact of LSTF Package on Trip Length Distribution in Portsmouth (2019)

3.4.3 Economy

The Transport Economic Efficiency (TEE) table for the overall package of measures (Appendix 3.2) shows the present value of benefits for business users and private sector transport providers over the 30 year appraisal period. There are significant travel time benefits to business users of public transport (£56.0m). In addition, there are also large net benefits to business cars & LGVs (£15.7m) and goods vehicles (£7.0m). While there are relatively small disbenefits to business users in terms of increased user charges (-£1.3m) these are more than outweighed by benefits from a reduction in vehicle operating costs (£1.8m). Overall the benefits to business users sum to £78.3m.

The TEE tables also show that the scheme generates significant benefits to private sector transport providers, amounting to £131.7m, in comparison to disbenefits in terms of operating costs (-£4.8m) and investment (-£5.3m).

Overall the benefits to business users and private sector transport providers amount to a present value of **£322m**[1], excluding indirect taxation effects. This reflects the fact that the package of measures is creating large time saving benefits to highway users as the future level of congestion is reduced, while at the same time reducing journey times for business users of public transport as the interventions to speed up journeys take place e.g. bus priority measures, smart ticketing and modal shift from behavioural change measures. The LSTF package creates reductions in demand particularly on those routes that access the international gateways in the TfSH area, which is likely to create these benefits for business users through reduced traffic on the road, and therefore reduced congestion and improved journey times. In Corridor 8, for example, which runs between Waterlooville and Portsmouth City Centre, including the Portsmouth docks, the LSTF package produces **8.3%** fewer highway person trips in 2026 compared to the reference case, a reduction of around **19,000** trips between 07:00 – 19:00hrs.

In terms of journey time reliability, the impacts have not been quantified. However, it is clear from the evidence presented in the Strategic Case that, if the interventions are not implemented, journey times are predicted to increase in the area as the level of congestion and delays rise. For example, around 10% of peak period travel time is spent waiting in queues. In addition, in the reference case total demand on the highway network is set to increase by 13% by 2026, while the total time lost due to delays is forecast to increase by 53% over the same period. A number of the measures proposed are aimed at reducing congestion levels and highway delays and therefore improve journey time reliability. For example, the introduction of the LSTF package is forecast to reduce the total time lost due to delays in 2026 AM peak by **4%** compared to the reference case, with the impact even greater in the PM peak where the LSTF package reduces delay time by **6%** compared to the reference case.

Journey times on twelve key routes (shown in Appendix 3.9) have also been analysed to show the impact of the LSTF package compared to the Reference Case. *Table 3.2* below shows the percentage change in AM peak journey time (in 2026) on these routes as a result of the interventions.

[1] It should be noted that all TEE impacts are measured in discounted values in 2002 prices.

Route	% Journey Time Improvement	
	Physical Interventions + Smartcards	Whole Package
Eastbound (Netley Marsh to Swaythling)	0.0%	-1.1%
Westbound (Swaythling to Netley Marsh)	0.3%	-1.4%
Eastbound (Millbrook to Old Netley)	0.2%	-3.8%
Westbound (Old Netley to Millbrook)	0.0%	-2.5%
Northbound (City Centre to Allbrook)	-0.6%	-0.5%
Southbound (Allbrook to City Centre)	0.0%	-2.3%
Northbound (Southampton Terminus to Chilworth Common)	-0.5%	-0.8%
Southbound (Chilworth Common to Southampton Terminus)	-0.3%	-2.3%
Northbound (Old Netley to Southampton Common)	-0.6%	-5.3%
Southbound (Southampton Common to Old Netley)	0.4%	-2.1%
Northbound (Old Netley to Bassett)	-0.3%	-1.2%
Southbound (Bassett to Old Netley)	-0.3%	-0.5%
Northbound (City Centre to Upton)	0.3%	-0.3%
Southbound (Upton to City Centre)	0.4%	-1.0%
Eastbound (Old Netley to Fareham)	-0.2%	-0.7%
Westbound (Fareham to Old Netley)	-0.3%	-1.0%
Northbound (Gosport Ferry to Catisfield)	0.0%	-1.8%
Southbound (Catisfield to Gosport Ferry)	0.1%	-0.3%
Clockwise (Fort Brockhurst to Cosham)	-0.2%	-2.1%
Anticlockwise (Cosham to Fort Brockhurst)	0.0%	-0.3%
Northbound (Cosham to Horndean)	0.0%	0.0%
Southbound (Horndean to Cosham)	0.0%	-3.0%
Northbound (Purbrook to Horndean)	-0.4%	-1.8%
Southbound (Horndean to Purbrook)	-0.1%	-1.6%

Table 3.2 Impact of LSTF Package on Journey Times (AM Peak, 2026)

Table 3.2 clearly illustrates that whilst the physical interventions and smartcards on their own have a limited impact on highway journey times, once behavioural change measures are included in the package, journey time reductions are seen on all but one of twelve key routes included within the corridors.

The average journey time reduction across the twelve routes for the whole package is 24 seconds, with some routes seeing reductions of over 60 seconds. By combining the physical improvements with the shift in travel demand created by smartcards and behavioural change, it is clear that positive results can be delivered to support the intended objectives and help ameliorate the transport-related problems and associated constraints set out in the Strategic Case.

One of the key aims of the LSTF package is to improve the quality of alternative modes to the car such as public transport and to encourage mode shift from car by making these sustainable options more attractive. Measures such as bus priority, smartcards and RTI will all contribute to these objectives. Bus journey times have been analysed on key routes within the LSTF corridors (see map in Appendix 3.10) compared to the Reference Case. *Table 3.3* below shows the percentage change in AM peak inbound journey time (in 2026) on these routes as a result of the interventions.

Corridor	Bus Route	% Change in Journey Time	
		Physical Interventions + Smartcards	Whole Package
Corridor 1	Bluestar 8 Hythe - Southampton	-0.3%	-0.7%
Corridor 2	First 10 Lord's Hill - Thornhill	-0.6%	-3.4%
Corridor 3	Bluestar 1 Winchester - Southampton	2.6%	1.7%
Corridor 4	First 7 Bassett Green - Southampton	-0.6%	-2.9%
Corridor 5	First 3 Bitterne Park - Southampton	-2.3%	-4.8%
Corridor 6	First 10 Lord's Hill - Thornhill / First 9 Thornhill - Southampton	-0.6% / -2.4%	-3.4% / -6.7%
Corridor 7	First 82 Gosport - Fareham	-1.5%	-3.4%
Corridor 8	First 1 Cosham - Portsmouth / First 41 Clanfield - Portsmouth	1.2% / 1.3%	-0.8% / -1.1%
Corridor 9	Stagecoach 21 Havant - Portsmouth	0.9%	-0.8%

Table 3.3: Impact of LSTF on Bus Journey Times (AM Peak, Inbound, 2026)

Table 3.3 shows that the LSTF package brings about a reduction in bus journey times on all but one route. The route in question runs from Winchester to Southampton and the LSTF package is only being implemented on part of this route. Overall, the results are positive with the average reduction in journey time across the analysed routes being 55 seconds and over a minute if the Winchester - Southampton route is excluded. It is also clear from the table that the reduction in journey times is more significant once behavioural change interventions are included, as they reinforce the benefits seen from physical interventions and smartcards.

Regeneration – The Guidance explains that evidence should be provided on the impacts of the large project package on economic growth, starting from the year before the measures come into operation. The Strategic Case provided detailed commentary on the economic context of the South Hampshire area and its relatively poor performance in a number of areas in recent years. It also set out how large parts of the current public transport network are unattractive to users, unreliable and can result in long journey times. In addition, it is not designed to support current businesses and meet the access needs of employees and other groups in society. Overall, much of the transport network is not of the necessary standard to support a modern, dynamic 21st century successful regional economy.

The Strategic Case identified a number of areas of South Hampshire with pockets of relatively high levels of unemployment. These areas are characterised by poor access to employment opportunities driven, to a large extent, by limited access to public transport, or other low-cost public transport options, for many parts of the workforce. This constraint is having a negative impact on the efficiency of the labour market and contributing to deprivation and poor business performance. A large number of the measures proposed are particularly aimed at alleviating the current problems, promoting regeneration and the economic vitality of the area.

The analysis carried out shows that the current transport network is constraining economic growth and levels of employment, this is particularly apparent along key corridors serving Portsmouth and Southampton city centres. *Figure 3.7* below shows that the introduction of the package of measures aimed at reducing the barriers to employment opportunities will lead to an increase in the level of employment and therefore contribute to the economic objectives.

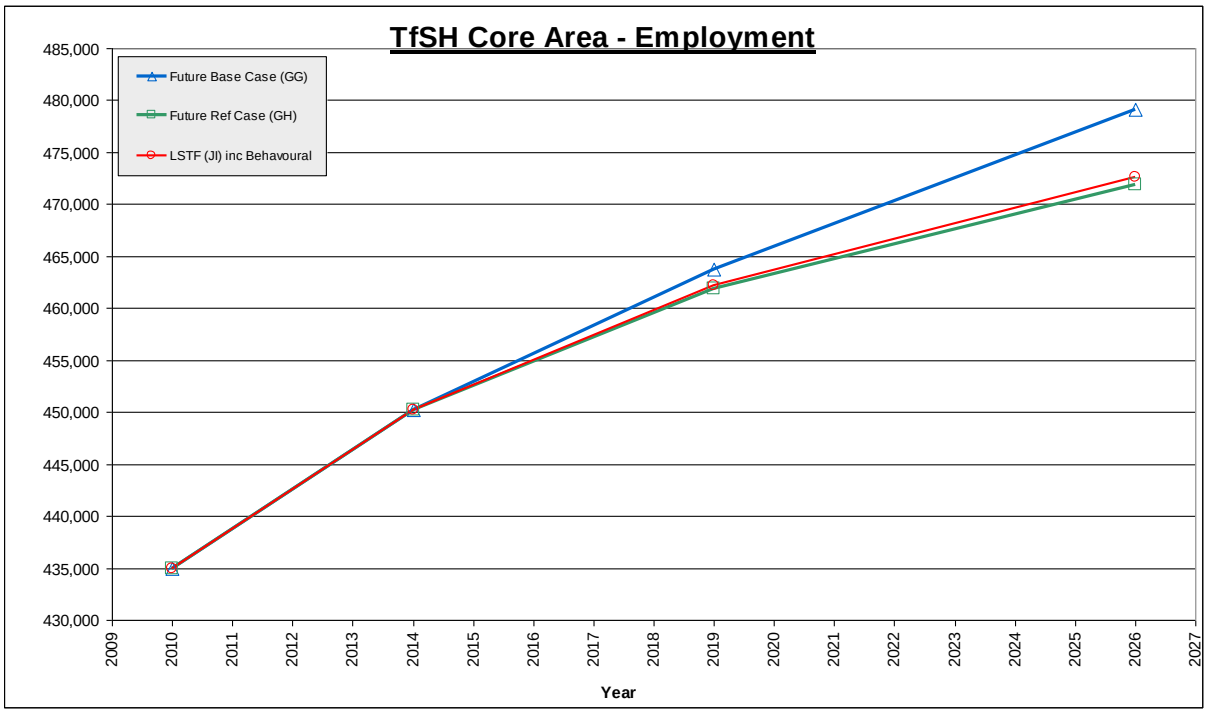


Figure 3.7: Impact of LSTF Package on Employment Growth

In the above *figure 3.7,* the blue line represents unconstrained employment growth and the green line represents employment growth under the reference case. The gap between the two therefore represents the impact on employment due to the transport constraints. The red line illustrates the impact of the LSTF package on employment. It indicates a small positive shift towards the preferred scenario depicted by the blue line. The graph indicates that in 2026 11% of the employment that would have been suppressed in the core area is taken up once the proposed package is introduced.

Analysis from the Local Economic Impact Model (LEIM) shows that the LSTF package will result directly in **375** new jobs in the core TfSH area by 2019 and **763** new jobs by 2026. The majority of these are forecast to be in the cities of Portsmouth and Southampton, therefore supporting the 'cities first' approach advocated by PUSH.

The reduction in the impacts of the constraints and subsequent increase in employment will be achieved through a number of factors. Firstly, the measures proposed will help regenerate the area by improving access to jobs for large parts of the workforce, for example, by reducing journey times to employment opportunities for the unemployed. This will be particularly relevant for those people dependent on public transport for getting to work and increase the coverage for employment opportunities.

Figure 3.8 below shows the percentage change in access to employment (ie from home to the employment market) for the full package compared to the Reference Case. A 'Hansen' measure has been used to estimate a measure of accessibility (using public transport) to all employment opportunities across the area for each zone. The measure uses a combination of travel times, number of jobs (based on outputs from the LEIM) and a decay function to represent the fact that a job opportunity close by is 'worth' more than a more distant opportunity (in terms of travel times). This produces a single value for each zone where a high 'score' represents good accessibility. These 'scores' can be compared in the 'do something' and 'reference case' cases.

Areas with the darkest shades of blue see the biggest improvements in access to employment using public transport whilst those areas with lighter shades see a smaller improvement. The magnitude of the improvements is not large but the Figure shows how improvements in terms of accessing the employment market by public transport are distributed across the study area. Only a very small number of areas see a drop in levels of accessibility. Further analysis showed that many of the areas represented by dark blue correspond with areas with relatively higher levels of unemployment.

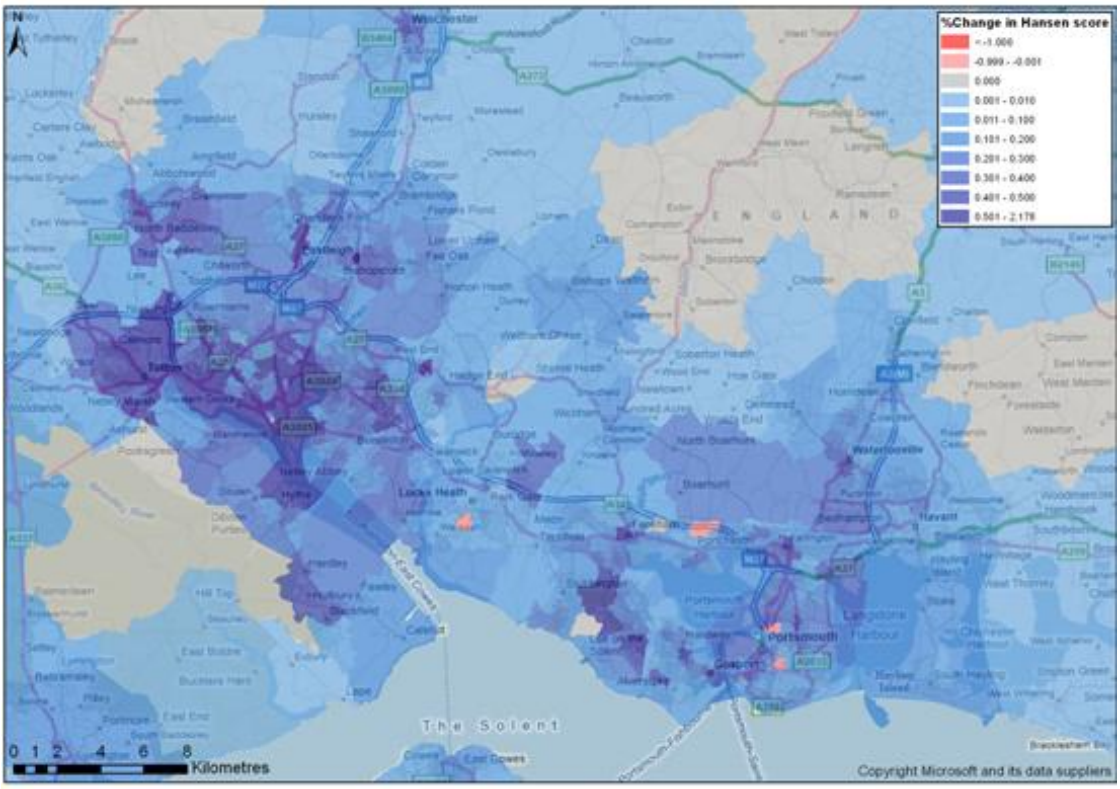


Figure 3.8: LSTF Package Impact on Access to Employment

There are particular benefits from the LSTF package in terms of accessing employment in the Southampton area. The impact of interventions to improve connectivity between Hythe and Southampton City Centre (Corridor 1) for example, is shown in the dark blue shading in this area. The same is true of Totton (Corridor 2), Romsey (Corridor 3) and Chandler's Ford (Corridor 4). Improvements are also seen along the Fareham–Gosport corridor (Corridor 7), which is particularly important given the relatively high levels of deprivation currently seen in parts of the Gosport peninsula.

The second benefit will be generated by improving local employers' access to the workforce. This will ensure labour skills are more effectively matched with the specific needs of businesses and lead to higher levels of productivity and, potentially, greater levels of output. Many of the measures have been implemented in areas where businesses have experienced higher than average levels of vacancies. In this case it is likely that there are shortages in the workforce which may be filled by creating access to a larger pool of labour for affected businesses.

Thirdly, by reducing congestion, businesses will have greater access to a larger pool of both suppliers and customers. Reduced travel times will mean that products will be able to get to market quicker and open up new opportunities for developing existing customer bases. In addition, improved access to suppliers will lead to greater efficiencies and, ultimately, higher demand for labour as these efficiencies feed through to higher levels of output. The measures have been particularly targeted at those industries and areas which are most likely to suffer congestion on particular corridors. These impacts will be apparent for the major ports at

Southampton and Portsmouth, where the evidence shows that congestion levels on the main transport corridors is constraining business development opportunities through poor access to key markets. Specific interventions, such as the freight consolidation centre and the online freight booking system will also contribute to delivering these efficiency benefits.

The results of the analysis clearly show that there will be significant benefits to businesses from reduced travel time, not only from the package as a whole but specifically from the physical interventions along the key arterial routes serving the city centres of Portsmouth and Southampton and the ports. For example, a number of the individual corridor results reveal significant time savings for businesses along the individual corridors serving Southampton and Portsmouth. These benefits can be converted into improved efficiencies, higher levels of productivity and greater output. The consequence of the increase in productivity will feed through to higher levels of growth and therefore increased demand for labour, thus removing the economic constraint caused by the current transport system and consequently helping to achieve the potential growth in employment outlined in the figure above.

As part of the analysis we have also estimated the value of the wider impacts associated with the proposed package. This analysis is not yet complete but we are in a position to provide some initial results for several different impacts. All figures are discounted 2002 values, and include impacts in surrounding areas as well as the PUSH area itself.

Initial results indicate:

- A single year value for 2014 of £3.94m from increased efficiency through agglomeration
- A further £0.15m single year value for 2014 arising from the net increase in people in work
- A small benefit from redistribution of jobs to areas of higher productivity within the PUSH area (amounting to £0.13m p.a.by 2019). In addition, the gain in GDP will be more than £8m p.a. by 2019.

3.5 Environmental Impacts

The WebTAG guidance and AST includes a requirement to discuss all environmental impacts. However, it is clear that the main environmental impact will be on carbon. There will also be positive impacts in terms of air quality. The other impacts on noise, landscape, townscape, heritage, biodiversity and water environment are likely to be minimal given the nature of the interventions.

3.5.2 Reducing Carbon

The Strategic Case explained the negative impacts the current transport system is having on the level of carbon emissions in the South Hampshire area. For example, carbon emissions in the area amount to 10m tonnes per annum, with road transport accounting for approximately 25% of this. In addition, while advances in vehicle technology are forecast to contribute to a reduction in the rate of growth in carbon emissions in the short term, the evidence from the analysis also shows that from the mid-2020s emission levels are likely to return to a trend similar to that recently recorded in the Southampton and Portsmouth areas.

The measures proposed will have a very positive impact on the level of emissions forecast. For example, interventions such as smart ticketing, bus priority, junction improvements along a number of corridors and the introduction of travel plans and other behavioural change measures will lead to reduced delays on many parts of the highway network, a move to more sustainable modes and a reduction in the amount of travel. For example, the evidence gathered clearly shows that, in densely populated areas, 68% of trips made by private car are less than 5km. By encouraging greater use of more sustainable modes for trips of this length the analysis shows that this will have a large positive impact on emission levels.

In addition, the evidence shows that there is significant opportunity to encourage people to make more short trips by active travel modes. The Strategic Case explained that the number of trips made by active modes in the TfSH area is forecast to grow by only 5% between 2010 and 2016. The range of measures aimed at introducing and improving cycle networks, developing pedestrian crossings and junctions, improving pedestrian access, together with significant public realm improvements have a positive impact on the number of trips made by active travel. The TEE tables, for example, show that there will be major benefits from travel time reductions for non-business users, particularly those for non-commuters ie for non-work purposes.

The TEE results driven by TUBA point to significant monetised carbon benefits of £3.7m. However, while this is positive, and would make a significant contribution to the objective of reducing carbon, it is clear that there are weaknesses in the application of TUBA in effectively measuring carbon impacts. TUBA bases its calculation of carbon impacts on the average speeds between each origin and destination pair. However, in reality greenhouse gas emissions are based on fuel consumption, which follows a U-shaped relationship with speed, so that any journey consisting of a fast uncongested section and a slow congested section will emit more CO2 than predicted by the OD-average speed. More-importantly, network changes

which reduce congestion may result in TUBA incorrectly suggesting an increase in CO2 emissions for any journeys whose current OD-average speed is higher than the fuel-minimising optimum for that vehicle type.

In light of this, and to confirm the carbon impact, a decision was taken to use an alternative tool to measure the carbon impact. The SRTM has an inbuilt Emissions Assessment Tool (EAT) application, which provides outputs for carbon and other gas emissions. The SRTM-EAT uses the same underlying methodology as used in the DEFRA Emissions Factor Toolkit. The results from EAT show that the full LSTF package has a positive impact on carbon emissions with **53,238** fewer kilograms per 12 hour period emitted compared to the reference case. This equates to a maximum **25,750** fewer tonnes of carbon emitted on an annual basis[2] as a result of the LSTF package. This is a reduction of **0.9%** on the reference case carbon emissions and a significant positive impact.

Looking at results for the components of the package (see Appendix 3.3) it appears that the largest carbon benefits occur as a result of the behavioural change measures, reflecting the shift to active modes and public transport, as well as a reduction in overall travel demand.

3.5.3 Other Non-Carbon Environmental Impacts

Air Quality

The SRTM-EAT tool has also provided data on the impacts of the LSTF package on other emissions. *Table 3.4* summarises the change in emissions by 2026 as a result of the full package of measures.

Emission type	Kg per 12 hour period	Percentage change from Reference Case
Nitrogen Oxide (NOx)	-121	-0.8%
Particulate matter (PM10)	-2	-0.7%
Hydro-Carbons (HC)	-92	-1.2%
Carbon Monoxide (CO)	-666	-0.8%

Table 3.4: Air Quality Impacts of LSTF Package (2026)

[2] Assuming a 1.265 factor for the 12 hour period between 1900 – 0700 based on variation in highway demand observed in the SRTM.

Table 3.4 shows the small positive impact that the package is expected to have on all key emissions. Annual figures[3] for 2026 are a reduction of **56 tonnes of NOx**, **1 tonne of PM10**, **42 tonnes of hydro-carbons** and **307 tonnes of carbon monoxide** as a result of the LSTF package. The reduction in NOx is particularly significant as 11 Air Quality Management Areas (AQMAs) have been declared in TfSH due to exceedences in NOx. All except the Fawley AQMA are on the LSTF corridors and will benefit as a result of the package.

Noise, Landscape, Heritage, Biodiversity, Water and Townscape

Given the nature of the package of measures proposed, the interventions will have minimal impact against the other environmental criteria of noise, landscape, heritage, biodiversity, and water environment. This is because the package is focused on behavioural change and small scale improvements to existing infrastructure in urban areas. Therefore, significant changes to the urban landscape are not anticipated.

However, the measures include public realm improvements in Southampton city centre and these will have a positive impact on the townscape. Streetscene improvements to roads adjacent to the station will provide an improved pedestrian and cyclist environment by reducing barriers to movement and creating more continuous walking and cycle routes. The improvements will also enhance the urban landscape and create more of a gateway into the City. Several interchanges, such as Totton and Eastleigh rail stations, will also benefit from public realm improvements to enhance the station frontage and promote sustainable modes of travel as well as improve the look and feel of the locality.

[3] Again assuming a factor of 1.265 for the 12 hour period between 1900 – 0700 based on variation in highway demand observed in the SRTM.

3.6 Social Impacts

The social criteria includes impacts on: commuting and other users; reliability impact on commuting; physical activity; journey quality; accidents; security; integration; access to services; affordability; severance; and option values. Each of these is discussed in turn, but the Social and Distributional Impacts (SDI) analysis will overlap with many of these and is addressed first.

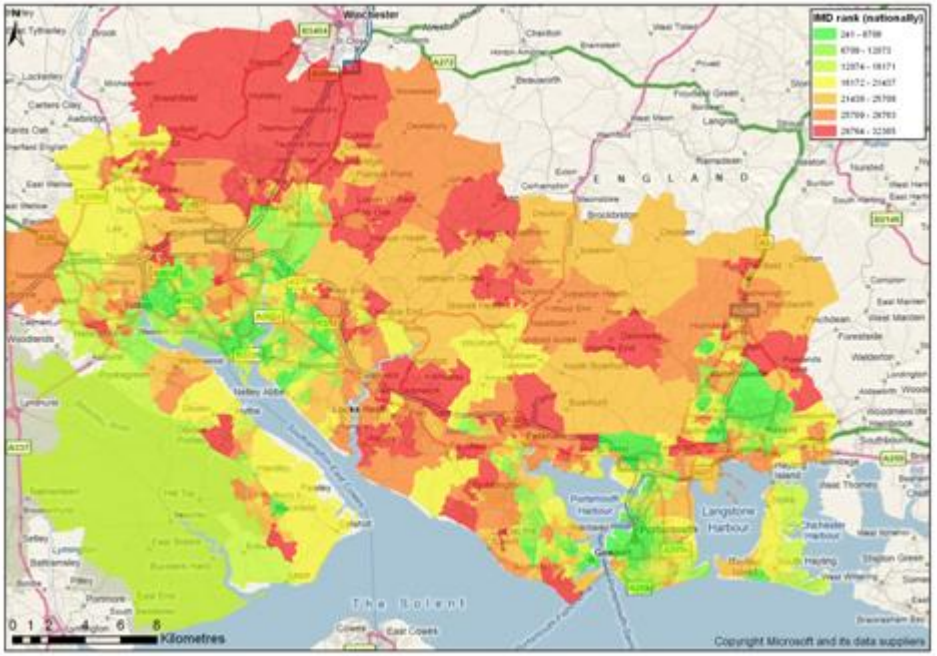
3.6.1 Social and Distributional Impacts

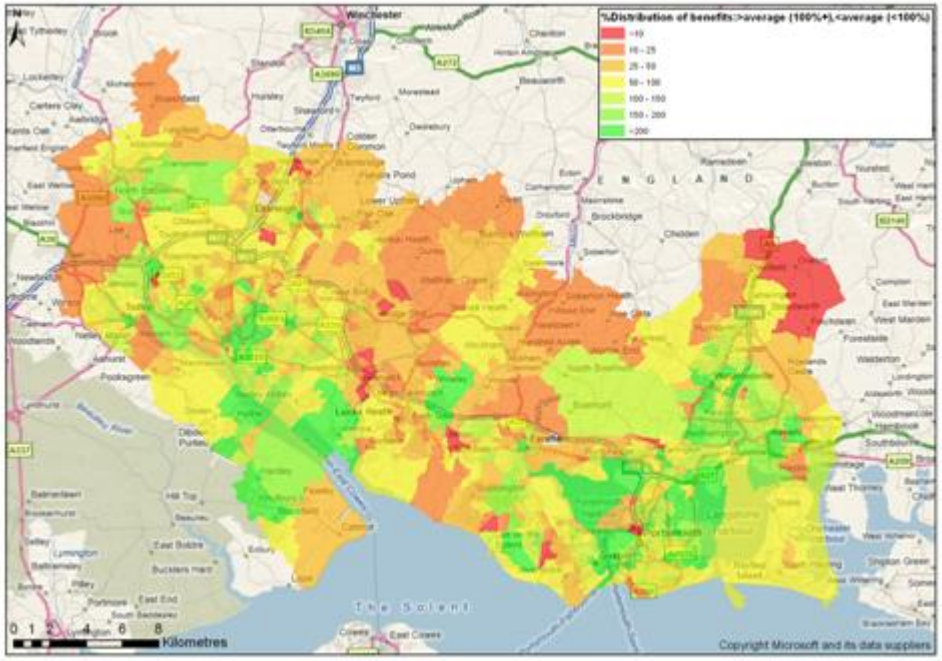
The aim of the social and distributional impact analysis is to gain an understanding of the distribution of the impacts associated with the transport interventions and to determine who gains and whether those that do gain are the groups in most need. While the WebTAG guidance sets out eight criteria on which the analysis should focus, the proportionate approach adopted for this study focuses on the distribution of user benefits and the accessibility impacts and how these compare against the most deprived areas within South Hampshire. While this is limited it does reflect the problems identified in the Strategic Case as well as the associated objectives.

The first task was to map the levels of deprivation in the South Hampshire area. This is set out on the left hand side of *Figure 3.09*, which shows the relative levels of deprivation using the national index of multiple deprivation. The green shaded areas represent the most deprived areas, and the red areas the least deprived. The darker the green shading the more deprived an area. The mapping shows that the areas with the highest levels of deprivation are concentrated in the cities of Southampton and Portsmouth as well Havant and Gosport. These are the areas where the majority of interventions are focussed.

The next task was to map the distribution of benefits across all modes. This is shown on the right hand side of *Figure 3.09*, compared to deprivation shown on the left. In this Figure, the areas which are shaded green are those areas which receive the greatest level of benefit compared to the average level of benefit. The red represents those areas which receive the least amount of benefit compared to the average. The yellow areas represent the areas which receive average benefits. For example, it is clear from the mapping that the areas of Gosport and Portsmouth accrue transport benefits which are significantly greater than the average. This is also true for Waterlooville, Havant and large areas of Southampton city. Indeed, it is clear that there is a strong correlation between the areas of relatively high deprivation and those areas which receive the greatest transport benefits.

Figure 3.09: Distribution of Benefits resulting from LSTF Package (all modes)

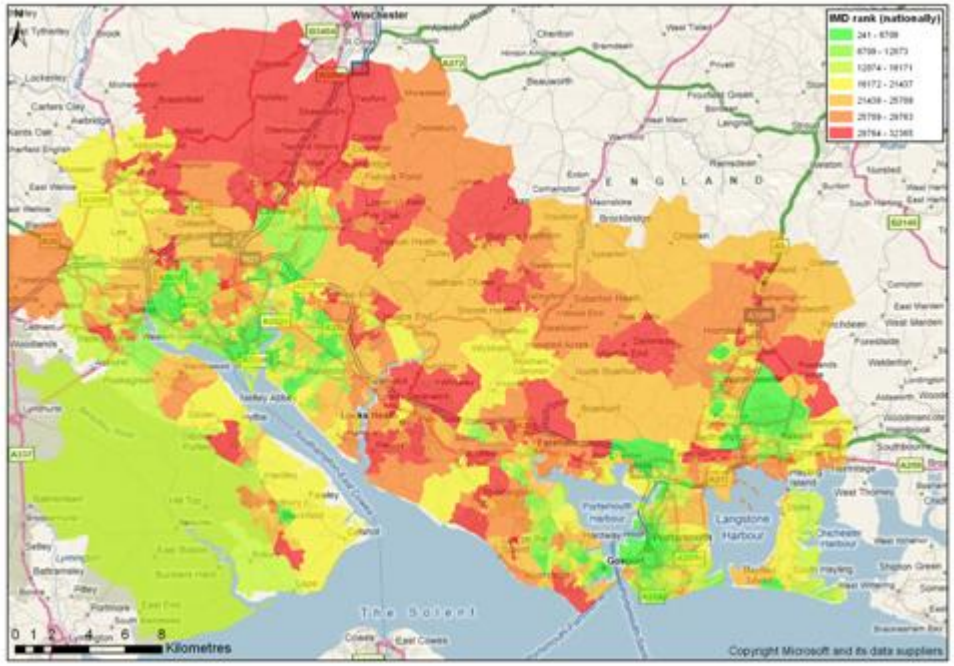


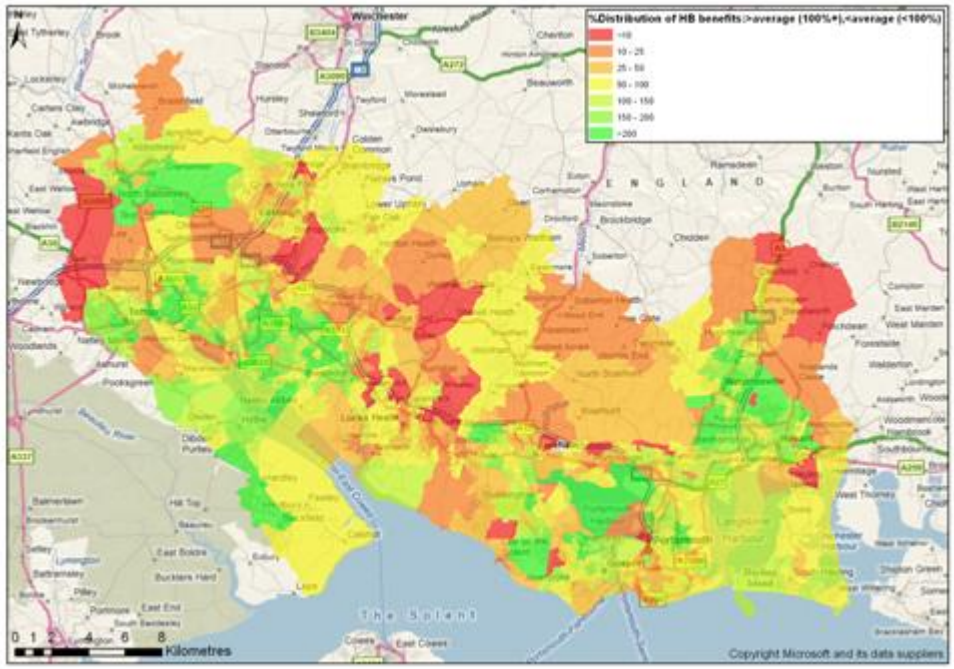


As well as the distribution of transport benefits as a whole, the distribution of home-based trips by public transport was also examined. The purpose of this exercise was to look at the distribution of benefits from a residential perspective, based on public transport only. This is mapped on the right hand side of *Figure 3.11* on the following page, which uses the same colour-coding ie the areas which receive the greatest benefits are shaded in dark green.

The Figure, again, shows that the public transport benefits accrue to those residencies in Waterlooville, Havant, Portsmouth city centre and Southampton city centre. Once more, there is a strong correlation between those residencies which receive the greatest benefits through public transport improvements and those areas witnessing high levels of deprivation and, indeed, those groups which were specifically targeted to ensure the public transport improvements would improve employment opportunities and social wellbeing.

Figures 3.10: Distribution of Home-Based benefits resulting from LSTF Package (public transport only)





3.6.2 Commuting and Other Users

The TUBA results show that there are significant benefits to commuters and other users. For commuters, there are large travel time benefits for public transport users (£27.8m) as well as commuters using the private car and LGVs (£11.4 m). While there is a small level of disbenefits in user charges (£2.1m) for public transport users and car users, there is also a benefit in terms of a reduction in vehicle operating costs for private car users (£9.1m). Overall the present value of benefits for commuters is **£47.1m**, essentially driven by the measures to reduce highway congestion at peak periods, through encouraging modal shift (eg through behavioural changes) and reducing public transport journey times (eg by introducing bus priority and junction improvements).

For non-business 'other' users there are significant benefits from reductions in journey times for public transport users during the inter peak period (£46.0m). There are also large travel time and vehicle operating cost benefits (£15.5m and £11.1m respectively) for private cars and LGVs during the inter peak period. There is also a benefit of £5.7m for those using active modes, through reductions in travel time.

Overall the benefits to non-business users amount to **£74.6m**. The results show clearly that the measures to reduce congestion through modal shift, and thus creating a more efficient highway network, have a positive impact on people's journey times, both for private car users and users of public transport.

3.6.3 Reliability Impact on Commuting

While the reliability impacts have not been quantified, it is likely that the variance in journey time will decline as the network becomes less congested, particularly in those corridors where bus priority measures have been introduced. It is clear from the TEE tables that there are improved efficiencies on the network from less congestion and reduced delays (See *Table 3.3*). It is likely that these impacts will also create positive impacts on the reliability of the network, both in terms of private car and public transport. This is illustrated by the journey time reductions for car and bus as a result of the LSTF package, which are shown in *Tables 3.2* and *3.3.*

3.6.4 Physical Activity

As explained above under the environment section, the evidence shows that there is considerable opportunity to increase the amount of travel using active modes. Around 68% of trips under 5km are taken using the private car. In addition, the total number of trips forecast to be made by active travel in the South Hampshire area between 2010 and 2026 is forecast to only grow by 5%.

It is clear from the evidence provided in the Strategic Case that there are considerable opportunities in a number of the corridors to travel by active mode, either to access work or for leisure. In a number of places where this is the case, cycling and walking schemes have been included in the corridor interventions to improve or introduce new facilities. These include cycle and walking link improvements, additional links to networks, cycle links through city centres, cycling

and walking junction improvements and improved public realm. The evidence gathered shows that there will be significant benefits for those using active modes (TEE tables show monetised benefit of £7.2m for business and business users combined) and this will lead to an increase in physical activity, particularly in areas of South Hampshire with relatively poor health records e.g. higher than national average levels of obesity.

We have also conducted analysis using the Health Effects Assessment Tool (HEAT), which is built into the SRTM. This shows the benefits of the LSTF package in terms of reduced mortality, reduced absenteeism and overall lives saved as a direct consequence of increased levels of physical activity taken by the introduction of the new facilities. A summary of the impacts of the package on these health indicators is shown in *Table 3.5.*

Health Indicator	Impact of LSTF Package
Total lives saved	0.82 persons per year
Mortality	£992,758 per year
Absenteeism benefits	£259,918 per year

Table 3.5: Health Impacts of LSTF Package

Table 3.5 shows that the LSTF package results in nearly £1m of savings from reduced mortality per year and over £0.25m from reduced absenteeism. By 2026, this would equate to combined savings of over £15 million. This is as a result of the shift to more active modes, with particular benefits in reduced absenteeism seen from increases in walking. In addition, nearly one life per year is saved as a result of the LSTF package increasing the use of active modes, equivalent to nearly 10 lives by 2026.

3.6.5 Journey Quality

The package of measures includes a number of interventions aimed at improving journey quality, with the ultimate aim of increasing the attractiveness of public transport in the South Hampshire area. The measures include factors such as more comfortable waiting facilities, new real time information, on-bus Automatic Vehicle Location, improved signage, BRT bus infrastructure improvements and infrastructure improvements at transport interchanges, bus routes and key local centres. These investments combined will have a significant impact on the quality of the journey experience, providing a further incentive for current public transport users to make additional trips (social inclusion) or for travellers using less sustainable modes to switch to public transport.

3.6.6 Accidents

We have carried out a simple analysis on the likely reduction in accidents as a result of the LSTF package, based on the reduction in highway vehicle km achieved by implementing the measures, the average costs per accident and average accidents per km. The analysis was undertaken by type of link using average accident cost and accident rates per km for 2014 and 2019 taken from COBA. These calculations suggest that savings from accident reductions could amount to £3.8m per year (2002 prices) as a result of the LSTF package. This derives from approximately 37 personal injury accidents (PIA) being avoided in 2019 at £103k per PIA. It should be noted that some of these savings will be offset by the increased number of walking and cycling trips but, nevertheless, this represents a **moderate positive** impact on safety in the TfSH area, derived from reduced highway demand and improvements to walking and cycling facilities.

3.6.7 Security

Changes to public realm and interchanges will contribute to a more attractive and safer environment for pedestrians, through improvements such as additional lighting and CCTV**.** Overall impact is estimated to be **small positive.**

3.6.8 Integration

The Strategic Case set out how the proposed package of measures complemented wider local, regional and national policies, particularly the important contributions made to supporting land-use policy set out in the local plans. This section therefore focuses on the transport interchange aspect of integration.

The range of physical interventions proposed along individual corridors, together with area wide measures, will result in a substantial improvement in the quality of transport interchange facilities for a significant number of people in the TfSH area. For example, the proposed measures will see enhancements to 16 bus, BRT and rail interchanges covering improved access, more and clearer information, cycle parking, shelters and seating. There will also be improved integration of public transport services with active modes through cycle links and pedestrian and cycle crossings. In addition, the package will involve a step change in the provision of public transport information with around 300 new Real Time Passenger Information screens located at key interchanges across the region.

In addition to the physical interventions at public transport interchanges, the proposed measures will also include the integration of public transport services with an inter-operable urban South Hampshire smart ticketing system, with an ITSO compliant smartcard across bus and ferry services, implemented and run in partnership with South Hampshire Bus Operator Association.

Table 3.6 below summarises the impacts against the transport interchange criteria set out in WebTAG Unit 3.7. The table demonstrates that the measures will lead to improvements across all areas, excluding visible staff presence which is currently regarded as moderate. However, under the other measures of the quality of transport interchange the proposed measures either improve the amenities to a category of **moderate** or **high**.

Passenger Interchange Indicator	Without Proposed Measures (Poor/Moderate/High)	With Proposed Measures (Poor/Moderate/High)
Waiting Environment	Poor	High
Level of facilities	Poor	Moderate
Level of Information	Moderate	High
Visible staff presence	Moderate	Moderate
Physical Linkage for next stage of journey	Poor	High
Connection time and risk of missing a connection	Moderate	High

Table 3.6: LSTF Package Impact on Integration

3.6.9 Access to services

There are a number of measures aimed at improving access to key services. These include, RTI, improved signage for pedestrians and bus stop improvements. The measures in particular are aimed at improving access to important facilities such as hospitals, health centres, education establishments, local leisure centres and key shopping areas within a number of corridors. The improvements are considered to have a **Large Positive** impact.

3.6.10 Personal affordability

The impacts on personal affordability are likely to be **moderate positive**. The measures aimed at increasing the attractiveness and availability of public transport services, particularly those serving areas of deprivation, will provide benefits to a number of vulnerable groups, such as those on low income, the young, students and the unemployed.

3.6.11 Severance

A number of measures have been included in the package that are specifically targeted at improving severance at particular locations within corridors. These include pedestrian link improvements, junction improvements for cyclists and pedestrians, pedestrian crossing measures and major investment in new public realm areas. For example, at Southampton Central Station there will be streetscene improvements to better accommodate pedestrian movements directly outside the station. In addition there will be new safe cycle and pedestrian crossings introduced at a number of junctions and roundabouts used to access the station. Using a conservative assumption it is likely that 25% of the 5.5 million rail passengers using the station annually would benefit. There will also be major improvements for

pedestrians and cyclists at key crossing points in the vicinity of the bus/ferry terminal in Gosport which will benefit hundreds of thousands of passengers per annum. These are only a few of the physical interventions which will be introduced as part of the overall package and will improve severance for pedestrians, cyclists and public transport users.

Using the approach set out in WebTAG to gauge the level of severance and the number of people affected, and applying *Table 3.7* below, both the relatively small and larger interventions will generate a **Moderate Positive** impact between the do-minimum and do-something options.

	Do-something severance score			
Do-minimum severance score	None	Slight	Moderate	Severe
None	None	Slight Negative	Moderate Negative	Large Negative
Slight	Slight Positive	None	Slight Negative	Moderate Negative
Moderate	Moderate Positive	Slight Positive	None	Slight Negative
Severe	Large Positive	Moderate Positive	Slight Positive	None

Table 3.7: Assessment of Change in Severance

Option values – Given the nature of the schemes considered within the overall package of measures, there is likely to be no measurable benefits generated in terms of option values.

3.7 Sensitivity Tests

In line with the guidance, and to understand the impact of adjusting key assumptions in the analysis, a number of sensitivity tests were carried out. The results of the tests are set out in *Table 3.8*.

The first test focussed on costs, and in particular the level of optimism bias assumed. The level of optimism bias has been based on hard evidence gathered from similar schemes which have been implemented elsewhere. This resulted in adjustments of 20% for the capital and maintenance costs of the area-wide smart ticketing scheme and physical interventions across the nine corridors. Despite the evidence based assumptions, it was agreed that the sensitivity tests would involve an assessment of the impacts using a figure of 40%. The adjustment resulted in a reduction in the BCR from 8.5 to 8.3. In addition, the NPV remained at £253m[4].

While these reductions are relatively small, they simply reflect the fact that the discounted capital and maintenance costs are low in comparison to the discounted benefits generated by the range of interventions ie a relatively large increase in costs will be small compared to the benefits.

While the smart ticketing scheme and physical interventions included a 20% bias uplift in the base case, the behavioural change measures included no optimism bias uplift as the costs are all revenue. While this is in line with the guidance, it was agreed that the sensitivity tests should include an adjustment to the revenue costs. The second sensitivity test therefore included a 20% uplift in revenue costs, as well as the 40% optimism bias adjustment to capital costs. The results of the test show that, under this scenario, the BCR falls to 7.2 and the NPV declines to £246m. The results therefore show that even including adjustments to capital and revenue costs of 40% and 20% respectively the package of measures still offer good value for money.

In addition to changing the cost assumptions, tests were also carried out analysing the impact of changing demand growth. The first test considered the impact of demand growing half as fast post 2012 compared to the base case. The impact of this change resulted in the BCR falling slightly to 8.4, with a marginally reduced NPV of £246m.

The second sensitivity test on demand considered the impact of halving the benefits generated by the behavioural change measures. This resulted in a BCR of 7.1 and an NPV of £201m.

The results continue to show that even when the key assumptions are adjusted to a more pessimistic level the proposed package of measures generates good value for money in terms of the BCR and NPV.

[4] Whilst the NPV declined, when rounded to the nearest £m it remained at £253m

Sensitivity Test	BCR	NPV
Base	8.5	£253m
Optimism bias increased to 40% on capital and maintenance	8.3	£253m
Optimism Bias of 40% on capital and maintenance and 20% on revenue costs	7.2	£246m
Demand growth reduced by 50% post 2012	8.4	£246m
Benefits of behavioural change measures halved	7.1	£201m

Table 3.8: Results of Sensitivity Tests

3.8 Other Tables

As well as the AST, there are three other tables which are integral to presenting the findings of the appraisal of the options in the Economic Case. These are:

- Transport Economic Efficiency (TEE) table
- Analysis of Monetised Costs and Benefits (AMCB) table
- Public Accounts (PA) table

3.8.2 Transport Economic Efficiency table

The TEE table is included in Appendix 3.2. The TEE table summarises the results of the transport economic efficiency impacts. As explained in Section 4, the results show there are large benefits to a number of groups, both business users and non-business users (commuters and others). In particular the figures show that the measures generate benefits for public transport users and users of private cars and LGVs. Overall the present value of benefits sums to over **£322m**, excluding indirect taxation effects.

3.8.3 Analysis of Monetised Costs and Benefits Table

The Analysis of Monetised Costs and Benefits table is set out in *Table 3.9* below. As the name suggests, the aim here is to aggregate the monetised costs and benefits (not just the economic impacts included in the TEE) to generate a BCR and NPV of those impacts.

The table shows that the overall package of measures generates a present value of benefits of £287m over the 30-year appraisal period (reduced from £325m once indirect tax is considered). The main benefits are split by businesses (£200m) and consumers (£122m). In addition the present value of costs, taken from the impact on the broad transport budget, is equal to £34m. These figures then generate an NPV of **£253m** and a BCR of **8.5**.

Greenhouse Gases	3,732
Economic Efficiency: Consumer Users (Commuting)	47,092
Economic Efficiency: Consumer Users (Other)	74,552
Economic Efficiency: Business Users and Providers	199,935
Wider Public Finances (Indirect Taxation Revenues)	-38,341
Present Value of Benefits (PVB)	**286,970**
Broad Transport Budget	**33,766**
Present Value of Costs (PVC)	**33,766**
OVERALL IMPACTS	
Net Present Value (NPV)	**253,204**
Benefit to Cost Ratio (BCR)	**8.5**

Note: This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.

Table 3.9: Monetised Costs and Benefits

3.8.4 The Public Accounts Tables

Public Accounts Table is set in *Table 3.10* below. The purpose of the table is to demonstrate the impact on the net costs to the 'broad transport budget'. The results show that the present value of the net impact on the broad transport budget is **£34m**. In addition the present value of the impact Wider Public Finances is **£38m**.

Table 3.10: Public Accounts

Local Government Funding	**ALL MODES**	**ROAD**	**PT**	**ACTIVE MODES**
Revenue	1,805	1,805	0	0
Operating Costs	11,668	0	10,929	739
Investment Costs	10,573	0	7,349	3,224
Developer Contributions	0	0	0	0
Grant/Subsidy Payments	0	0	0	0
NET IMPACT	24,046	1,805	18,278	3,963

Central Government Funding: Transport	**ALL MODES**	**ROAD**	**PT**	**ACTIVE MODES**
Revenue	0	0	0	0
Operating costs	3,071	0	3,071	0
Investment costs	6,648	0	4,624	2,024
Developer Contributions	0	0	0	0
Grant/Subsidy Payments	0	0	0	0
NET IMPACT	9,719	0	7,696	2,024

Central Government Funding: Non-Transport	**ALL MODES**	**ROAD**	**PT**	**ACTIVE MODES**
Indirect Tax Revenues	38,341	18,531	19,810	0

TOTALS				
Broad Transport Budget	33,766	1,805	5,987	5,987
Wider Public Finances	38,341	18,531	0	0

Note: Costs appear as positive numbers, while revenues and developer contributions appear as negative numbers.
Note: All entries are present values discounted to 2002, in 2002 prices

04 Commercial Case

4.1 Will We Deliver?

TfSH has a proven track-record of delivery. Delivery of the proposals is split between local authorities and transport operators. The governance of these delivery arrangements is explained in *Figure 6.2* in Section 06.

We are confident that all projects within this proposal are deliverable within the stated timescales and milestones. The scale of works and type of works are all familiar to the local authorities who are responsible for the delivery of the vast majority of the works. Where the bid requires increases in capacity to deliver, we also have flexible arrangements in place that allow us to mobilise resources to deliver on time.

The bid is split in funding, with approximately 1/5th on behaviour change measures, 2/5th on capital and the remaining 2/5th on smartcard infrastructure. The first two elements will be delivered by the local authorities only and the public transport operators will be responsible for the delivery of most of the smartcard infrastructure.

The nature of the bid proposals means that the majority of the projects being delivered will be relatively small and independent of each other. They also utilise a number of non competing resources which spreads the delivery responsibility. In addition the reduction in LTP funding by 1/3 last year has freed up delivery capacity.

Recent success in other bids does not compromise this position although it has created a need to think innovatively about delivery of behaviour change interventions in light of the success of the North Hampshire LSTF bid and the Southampton Sustainable Travel City. This risk was identified over a year ago and is proposed to be addressed through the creation of a shared service for behaviour change. This is covered in more detail later in this section.

4.2 Procurement

All three local authorities have a comprehensive and established approach to procurement which means that for almost all projects procurement arrangement are already in place and will support delivery. We also work together on joint procurements and through framework contracts to benefit from economies of scale. An example of this, relevant to the bid, is the shared back office for smart ticketing where one authority will take a lead role on behalf of the others.

The bus and ferry operators also have established procurement mechanisms many of which are set up at national/company levels.

This means that the majority, including all the capital elements, of the bid proposals, will benefit from:

- Being capable of being delivered through existing contracts
- Using competitively tendered rates
- Economies of scale and specialism
- Having access to additional resources which can be turned on as needs require

Project or Scheme	Procurement Mechanism	Estimate total value	Procurement Issue impacting on deliverability	Mitigation if any
Physical Measures				
Bus infrastructure Active travel measures Interchange measures	Existing highways partnerships or PFI arrangements within authorities	Circa £9m	No significant	
Smartcards				
On bus equipment	Led by PT operators under national frameworks	Circa £3m	No significant	
Back office	Lead authority procures	Under OJEU	Failure to agree shared service	Individual authorities make own arrangements
Marketing				
Smartcard Campaign	Tender for branding	Under OJEU limits	No significant	
Research	Existing data collection arrangements Tender for behaviour changes and attitudes survey	£300K in multiple contracts	No Significant	
Behaviour change campaigns	In house and via Behaviour Change Centre of Excellence	Circa £5m	Failure to agree shared service	Increase internal LA capacity Tender some elements to commercial market

Table 4.1: Procurement and Delivery

4.3 What are the main Commercial Risks to delivery?

There are a few areas where specialist skill or services are needed. Such services are not required in significant quantity and no OJEU limits are expected to be breached. In all cases the delivery of the larger capital schemes is covered through existing procurement arrangements.

Some elements of delivery require the setting up of shared services between the authorities. There is a risk that these are not created and this could impact on delivery. This applies to the behaviour change element of the proposal and on the shared back office for local authorities delivering the smartcard product. These risks features in our costed risk assessment with the risk being that agreement to deliver these elements of the proposal through shared service arrangement is not forthcoming from one or more local authorities.

4.4 Shared Service for Behaviour Change

The Southampton Sustainable Travel City LSTF tranch 1 bid is seeking to establish a Centre of Excellence (CoE) for Behaviour Change. This is a partnership between TFSH local authorities, the University of Southampton and SUSTRANS. The partnership delivers shared services. This allows flexibility of delivery, innovation, access to low cost labour supply, economies of scale and quality evaluation. Most importantly it allows the potential for authorities to trade and diversify the behaviour change skills into a number of socially-good behaviour change activities including health and energy behaviour change. With health promotion activities transferring from PCTs to local authorities in 2013, real opportunities exist to ensure that the bid proposals have long term viability beyond the LSTF period.

4.5 Shared Service for Smart Ticketing back office functions

Similar to the above, a change to delivery arrangements for smart ticketing services currently delivered by a mix of procurement methods requires formal Council approval of each authority which will not have been gained at the time of submitting the bid. The reason for this is that PCC and HCC have outsourced some elements of these services. Within the period of the LSTF these contracts expire, presenting the opportunity to create the shared service arrangement. It is our intention to do this under a lead authority arrangement. Headline appraisals of delivering these services through shared services have been undertaken. The economies of scale gained through sharing these services make a convincing case and have potential to result in cost savings for the authorities. The LSTF and the proposals within it could well become a catalyst that enables the authorities and public transport providers to work together as an informal Passenger Transport Executive. This is a higher policy goal which may be the outcome of the closer working that would be engendered by the nature of the proposals in this bid submission.

The consequence of shared services not being agreed is that unit costs of delivery would increase. In this case these increased costs would be borne by the local authorities post LSTF implementation.

05 Financial Case

5.1 Introduction

5.1.1 This section outlines details of the financial case, in particular the funding sought from the DfT. Other key aims are:

- to give assurances that TfSH has undertaken a robust estimation of the package costs in line with the Supplementary Guidance;
- to demonstrate a firm strategy has been developed for providing the local contributions to deliver the package of measures; and
- to give confidence that the proposed package of interventions will be financially sustainable beyond the LSTF funding period.

5.2 Summary of Funding Sought

5.2.1 The details of the funding sought for the overall package are summarised in *Table 2.1* below in accordance with the example table set out in the Supplementary Guidance. The table breaks down the costs for each of the three funding years between 2012/13 to 2014/15 by: DfT revenue sought; DfT capital sought; total DfT funding sought; local contribution provided by intervention; and, total cost of intervention.

	2012/13	2013/14	2014/15	Total
DfT revenue funding sought	£1,469,833	£2,668,028	£1,947,388	£6,085,000
DfT capital funding sought	£3,576,999	£4,160,752	£4,015,803	£11,754,000
DfT total funding sought	£5,046,832	£6,828,780	£5,963,191	£17,839,000
Local contribution	£3,372,217	£5,463,824	£4,488,541	£13,324,000
Total package costs	£8,419,049	£12,292,604	£10,451,732	£31,163,000

Table 0.1: Financial Information for Whole Package

5.2.2 In summary, the table shows that the total cost of the interventions over the three year funding period will be **£31,163,000**. Over the same period the total revenue funding sought from DfT is £6,085,200, split by £1,469,833 2012/13, £2,668,028 2013/14 and £1,947,388 2014/15. The total capital funding sought from DfT is £11,754,000, split by £3,576,999 2012/13, £4,160,752 2013/14 and £4,015,803 2014/15. This results in total DfT funding sought of **£17,839,000**, out of a total cost of £31,163,000 split by **£5,046,832** 2012/13, **£6,828,780** 2013/14 and **£5,963,191** 2014/15.

5.2.3 Over the three year funding period the local contribution from public authorities and the private sector sums to **£13,325,000**, split by £3,372,217 2012/13, £5,463,824 2013/14 and £4,488,541 2014/15.

5.2.4 All of the funding figures are in 2011 prices. To arrive at a current price base an inflation figure of 2.50% per annum has been used, in line with the Government's published inflation target. In a current / nominal price base the total grant sought is £18,769,194. This is split by £5,173,003 2012/13, £7,174,487 2013/14 and £6,421,704 2014/15.

5.3 Cost Breakdown by Strand

5.3.1 As explained in the Strategic Case, the proposed package is based around three strands of interventions. These are: physical interventions along nine corridors; a smart ticketing scheme; and, a range of behavioural change measures also targeted on the nine corridors. *Table 3.1* below provides a breakdown of the cost, together with disaggregated figures on revenue and capital funding sought, for the individual strands of the overall package. The table also includes an element for funding the detailed monitoring and evaluation programme planned to fully understand the impacts of the interventions and determine whether the benefits and costs forecast equated to the outturn. The monitoring exercise and data collection is planned to be in place in 2012/13 and is estimated to cost £100,000 per annum over the three-year funding period.

5.3.2 *Table 3.2* provides a similar breakdown by each of the nine corridors for the physical interventions. The costs provided by corridor are for corridor-specific physical interventions only and do not include any elements of the behavioural change or smartcard packages.

5.3.3 *Table 3.1* breaks down the costs for each of the three years between 2012/13 to 2014/15 by: DfT revenue sought by intervention; DfT capital sought by intervention; total DfT funding sought by intervention; local contribution provided by intervention; and, total cost of intervention. The final section of the table, setting out the totals, also splits the total cost of the interventions by capital and revenue.

All costs are in 2011 prices and do not include an allowance for inflation.

Table 0.1 Breakdown of Financial Information by Strand

£m	2012/13	2013/14	2014/15	Total
All Corridors				
DfT revenue sought	£9,833	£303,028	£359,388	£672,000
DfT Capital sought	£1,910,332	£2,494,085	£2,349,136	£6,754,000
Total DfT funding sought	£1,920,165	£2,797,113	£2,708,524	£7,426,000
Local Contribution	£1,834,884	£2,995,093	£4,173,772	£9,004,000
Sub Total	**£3,755,049**	**£5,792,206**	**£6,882,296**	**£16,430,000**
Smartcard Ticketing				
DfT revenue sought	£0	£0	£0	£0
DfT Capital sought	£1,666,667	£1,666,667	£1,666,667	£5,000,000
Total DfT funding sought	£1,666,667	£1,666,667	£1,666,667	£5,000,000
Local Contribution	£1,537,333	£2,468,731	£314,769	£4,321,000
Sub Total	**£3,203,999**	**£4,135,398**	**£1,981,436**	**£9,321,000**
Behavioural Change measures				
DfT revenue sought	£1,360,000	£2,265,000	£1,488,000	£5,113,000
DfT Capital sought	£0	£0	£0	£0
Total DfT funding sought	£1,360,000	£2,265,000	£1,488,000	£5,113,000
Local Contribution	£0	£0	£0	£0
Sub Total	**£1,360,000**	**£2,265,000**	**£1,488,000**	**£5,113,000**
Monitoring and Evaluation				
DfT Revenue sought	£100,000	£100,000	£100,000	£300,000
Sub Total	**£100,000**	**£100,000**	**£100,000**	**£300,000**
Totals				
Total Costs for all interventions	£8,419,049	£12,292,604	£10,451,732	£31,163,000
Total Revenue for all interventions	£1,552,056	£2,994,927	£2,218,287	£6,715,000
Total capital for all interventions	£6,866,994	£9,347,687	£8,233,455	£24,448,000
DfT revenue funding sought	£1,469,833	£2,668,028	£1,947,388	£6,085,000
DfT capital funding sought	£3,576,999	£4,160,752	£4,015,803	£11,754,000
Total DfT funding requested	£5,046,832	£6,828,780	£5,963,191	£17,839,000
Total local contribution	£3,372,000	£5,463,824	£4,488,541	£13,325,000

Table 3.2: Financial Breakdown by Corridor

£m	2012/13	2013/14	2014/15	Total
Corridor 1 – Hythe to Southampton City Centre				
DfT revenue sought	£0	£4,843	£5,874	£10,717
DfT Capital sought	£34,203	£29,743	£74,000	£137,946
Total DfT funding sought	£34,203	£34,586	£79,874	£148,663
Local Contribution	£19,875	£6,625	£106,000	£132,500
Sub Total	£54,078	£41,211	£185,874	£281,163
Corridor 2 – Totton to Southampton City Centre				
DfT revenue sought	£0	£11,636	£12,792	£24,428
DfT Capital sought	£263,335	£365,507	£714,000	£1,342,842
Total DfT funding sought	£263,335	£377,143	£726,792	£1,367,270
Local Contribution	£328,750	£276,250	£1,420,000	£2,025,000
Sub Total	£592,085	£653,393	£2,146,792	£3,392,270
Corridor 3 – Romsey to Southampton City Centre				
DfT revenue sought	£0	£17,276	£18,479	£35,755
DfT Capital sought	£89,236	£140,149	£46,850	£276,235
Total DfT funding sought	£89,236	£157,425	£65,329	£311,990
Local Contribution	£9,030	£63,170	£7,250	£79,450
Sub Total	£98,266	£220,595	£72,579	£391,440
Corridor 4 – Chandler's Ford to Southampton City Centre				
DfT revenue sought	£9,833	£53,187	£54,246	£117,266
DfT Capital sought	£79,280	£161,605	£17,000	£257,885
Total DfT funding sought	£89,113	£214,792	£71,246	£375,151
Local Contribution	£94,497	£365,614	£239,889	£700,000
Sub Total	£183,610	£580,406	£311,135	£1,075,151
Corridor 5 – Eastleigh to Southampton City Centre				
DfT revenue sought	£0	£32,881	£34,676	£67,557
DfT Capital sought	£232,810	£156,742	£425,814	£815,366
Total DfT funding sought	£232,810	£189,623	£460,490	£882,923

£m	2012/13	2013/14	2014/15	Total
Local Contribution	£77,515	£86,667	£193,067	£357,249
Sub Total	£310,325	£276,290	£653,557	£1,240,172
Corridor 6 – Eastern Suburbs to Southampton City Centre				
DfT revenue sought	£0	£26,406	£27,998	£54,404
DfT Capital sought	£266,227	£334,493	£203,950	£804,670
Total DfT funding sought	£266,227	£360,899	£231,948	£859,074
Local Contribution	£171,300	£271,300	£209,950	£652,550
Sub Total	£437,527	£632,199	£441,898	£1,511,624
Corridor 7 – Fareham to Gosport				
DfT revenue sought	£0	£31,878	£43,138	£75,016
DfT Capital sought	£292,990	£374,737	£438,562	£1,106,289
Total DfT funding sought	£292,990	£406,615	£481,700	£1,106,289
Local Contribution	£891,067	£1,271,517	£1,434,416	£3,597,000
Sub Total	£1,184,058	£1,678,132	£1,916,116	£4,778,306
Corridor 8 – Waterlooville to Portsmouth City Centre				
DfT revenue sought	£0	£77,049	£98,948	£175,997
DfT Capital sought	£392,717	£623,254	£127,760	£1,143,731
Total DfT funding sought	£392,717	£700,303	£226,708	£1,319,728
Local Contribution	£147,750	£622,250	£56,000	£826,000
Sub Total	£540,467	£1,322,553	£282,708	£2,145,728
Corridor 9 – Havant to Portsmouth City Centre				
DfT revenue sought	£0	£47,872	£63,237	£111,109
DfT Capital sought	£259,534	£307,855	£301,200	£868,589
Total DfT funding sought	£259,534	£357,727	£364,437	£979,698
Local Contribution	£95,100	£31,700	£507,200	£634,000
Sub Total	£354,634	£387,427	£871,637	£1,613,697

5.4 Robustness of Package Costs

5.4.1 In estimating the package costs a detailed assessment has been carried out on the individual items making up the various strands. The costs feeding into the assessment have been calculated using a number of factors. For example, the estimates of the smart ticketing costs have included our knowledge of the market – our consultant MVA has a detailed insight into supplier costs through their heavy involvement with numerous smart ticketing schemes across the UK. In addition, a number of workshops were held where the required equipment and costs were discussed between the operator representatives from the bus industry, manufacturers and the local authorities. The main purpose of these discussions was to arrive at a realistic estimate of the costs of smart ticketing based on the experience of those involved in similar schemes.

5.4.2 The costs of the physical interventions have also been built up using a range of relevant information, including evidence from similar, previous schemes which have been implemented across the local authorities, feasibility studies carried out for previous schemes and detailed designs of schemes which were not implemented. Unit costs from previous schemes were also used and scaled up to reflect the specific characteristics of the proposed interventions. Overall, almost all scheme costs were heavily based on costs taken from other schemes, together with lessons learned from similar local authority projects. As well as previous costs, consultation was carried out with builders and developers to gain insight into the current market and understand whether the costs arrived at were likely to change.

5.4.3 The cost estimates for the behavioural change measures were also based on the experience of similar schemes implemented by other local authorities. In particular, they were informed by using best practice and experience from the three DfT funded Sustainable Demonstration Towns and Smarter Travel Sutton (funded by TfL in particular). The calculations also drew on the considerable experience of our behavioural change strand lead, who was previously programme manager for Smarter Travel Sutton. Meetings were held with other authorities to understand the initial cost estimates, what lessons were learned and how the risks which could impact on the outturn costs could be mitigated. It should be noted that the costs associated with the behavioural change measures are all revenue costs.

5.4.4 All costs include an element for contingency; this is in addition to an uplift to account for issues that could arise from the lessons learned by authorities which implemented similar schemes.

5.5 Local Contribution

5.5.1 The figures set out in the tables above show that of the total cost of the interventions, a sum of £13.325m will be provided through local contributions. These contributions come from a variety of sources including the local authorities, bus operators, BAA and other local businesses such as Aviva and B&Q. *Table 5.1* sets out the various contributions to the physical interventions and the smart ticketing scheme over the funding period 2012 to 2015 – DfT funding is being sought to cover all the costs of the behavioural change measures over this period.

Package Element	Total Local Contribution	Hampshire Contribution	Portsmouth Contribution	Southampton Contribution	Business Contribution
Physical interventions	£9.00m	£5.384m	£0.076m	£2.914m	£0.630m
Smart Ticketing	£4.32m	£0.698m	£0.233m	£0.233m	£3.16m

Table 5.1: Local Contributions for 2012-2015 Funding Period

5.5.2 In estimating these costs, a significant amount of effort has gone into developing a firm strategy to ensure the local contributions will be forthcoming. For example, for the smart ticketing scheme to succeed it will be important for the local authorities and operators to provide an ongoing commitment to support, maintain and staff the project. In preparation, a Memorandum of Understanding (MoU) has been set up between the authorities and the South Hampshire Bus Operators Association (SHBOA). This Memorandum is included in Appendix 2.5 and sets out the guiding principles of the agreement, the responsibilities of the individual parties and their respective actions up to March 2017.

5.6 Financial Sustainability

5.6.1 While *Table 3.1* above sets out the costs of the various strands of investment over the funding period up to 2014/15, there will be ongoing annual investment of £2.051m required to ensure the policies and schemes are maintained and the benefits continue to be realised into the future. For example, the smart ticketing will need ongoing operating and maintenance costs of around £1.25m per annum. This expenditure will be provided by operators and the constituent local authorities and agreement in principle has been set out in the MoU. In addition, the anticipated increase in the number of passengers generated by the smart ticketing scheme (as well as the bus priority and other measures, such as behavioural change) will lead to a need for increased capacity on the bus network and operators have given firm assurances that an increase in demand will be met by corresponding increase in bus capacity. *Table 6.1* sets out the various ongoing contributions under the three strands.

Package Element	Total Local Contribution	Hampshire Contribution	Portsmouth Contribution	Southampton Contribution	Business Contribution
Physical interventions	£0.255m	£0.103m	£0.060m	£0.063m	£0.029m
Smart Ticketing	£1.254m	£0.496m	£0.166m	£0.166m	£0.426m
Behavioural Change Measures[1]	£0.542m	£0.277m	£0.100m	£0.165m	£0
Total	£2.051m	£0.876m	£0.326m	£0.394m	£0.455m

Table 0.1 Ongoing Contributions per Annum by Package

5.6.2 The physical interventions will require ongoing maintenance costs which will be covered by the constituent local authorities. The level of maintenance costs vary by corridor, and therefore authority, but the total annual figure across all corridors is anticipated to be around £0.255m to maintain the capital asset. The respective authorities have given a firm commitment that any maintenance requirements will be forthcoming beyond the initial period of investment.

5.6.3 For the smart ticketing scheme, ongoing annual costs of around £1.254m will be required beyond the initial funding period. This will involve a contribution of £0.426m from operators. The remaining £0.827m will be split by one fifth contributed by Portsmouth City Council (£0.166m), one fifth funded by Southampton City Council (£0.166m) and the remaining three fifths (£0.496m) funded by Hampshire County Council.

5.6.4 The behavioural change measures will also require further injections of investment to ensure the benefits are maintained and a) those targeted do not return to the current travel behaviours and b) any new travellers are encouraged to use more sustainable forms of travel. The local authorities have made firm commitments to make further injections of revenue investment to ensure the early benefits generated do not decay. This amounts to some £0.155 per annum which will be targeted at the various travel plans along the 9 corridors. In addition, investment of £0.388m per annum (giving a total contribution of £0.542m) will be targeted at the area-wide behavioural change measures such as:

- The travel awareness campaigns (£100,000 per annum)
- Smart card promotion (£50,000 per annum)
- Itrace travel plan monitoring (£8,000 per annum)
- Legible bus networks (£15,000 per annum)
- Schools modeshift and road safety campaign (£80,000 per annum)
- Active steps / StreetTred campaign (£80,000 per annum)
- Car Clubs (£10,000 per annum)
- Job Centre Plus campaign (£45,000 per annum)

[1] The ongoing funding for the behavioural change measures is up to 2017/18 only.

5.6.6 All of these contributions demonstrate a firm commitment by authorities and operators to ensure the ongoing success of the package of measures beyond the initial three-year funding period.

5.7 Optimism Bias and Risk

5.7.1 In line with the LSTF Financial Case guidance, no optimism bias adjustment is included in the costs (though it is included in the analysis supporting the economic case). However, as part of the robust analysis on estimating costs, risks were identified and costed, and the outcome of a Quantified Risk Assessment is included in the cost estimates. Risk Registers, including a Quantified Risk Assessment are attached as Appendix 6.2 to the Management Case. The cost estimates therefore include an element for risk and contingency, and depending on the type of scheme this varies between 10% and 20%. In addition, the cost estimates arrived at contain a 'cushion' to allow for the 'lessons learned' from other, similar schemes which have been implemented by the local authorities in the TfSH area, or indeed by other authorities consulted. We believe we have therefore included realistic, if not pessimistic, estimates of the various costs across the overall package.

Appendix 04 includes the required Section 151 Officer sign-off.

06 Management Case

6.1 Introduction

TfSH is a partnership made up of the local transport authorities of HCC , Southampton City Council (SCC) and Portsmouth City Council (PCC), together with transport providers and other agencies, including business interests and Government departments. Within TfSH, a formally constituted Joint Committee is responsible for guiding the work of the partnership. Working with these key partners, TfSH is responsible for developing strategic transport solutions for the area and securing funding for their implementation by the relevant authorities. The Joint Committee meets three times per year, with a Strategy Working Group taking place bi-monthly. Both are attended by DfT, Highways Agency and Network Rail.

TfSH has been successful in raising the profile of the significant transport problems that exist in south Hampshire and in identifying solutions and funding opportunities. In April 2011, TfSH published a Joint South Hampshire Strategy, which represented a joint transport strategy statement within the Local Transport Plans of each of the thee local transport authorities of the TfSH. Stated within the LTP, the vision of the TfSH authorities is to create:

> *"A resilient, cost-effective, fully-integrated sub-national transport network, enabling economic growth whilst protecting and enhancing health, quality of life and environment."*

This section sets out how TfSH plans to manage, deliver and evaluate the project and its elements.

6.2 Governance

The approach to governing the project is to use, where possible, existing structures and process. This will ensure that maximum value can be extracted from the funding by minimising project management bureaucracy. This is illustrated in *Figure 6.2*. Working down from the top of the diagram the different colours denote agreement of the LSTF strategy at TfSH Joint Committee, programme and project management processed, approvals and delivery stages.

The TfSH Joint Committee already exists and includes a wide and high level strategic stakeholder community including the LEP, Highways Agency, DfT, PT operators, all three highway authorities and is also attended by other business organisations and district councils. It is a strong and recognised partnership which will give support to and help evolve the LSTF strategy.

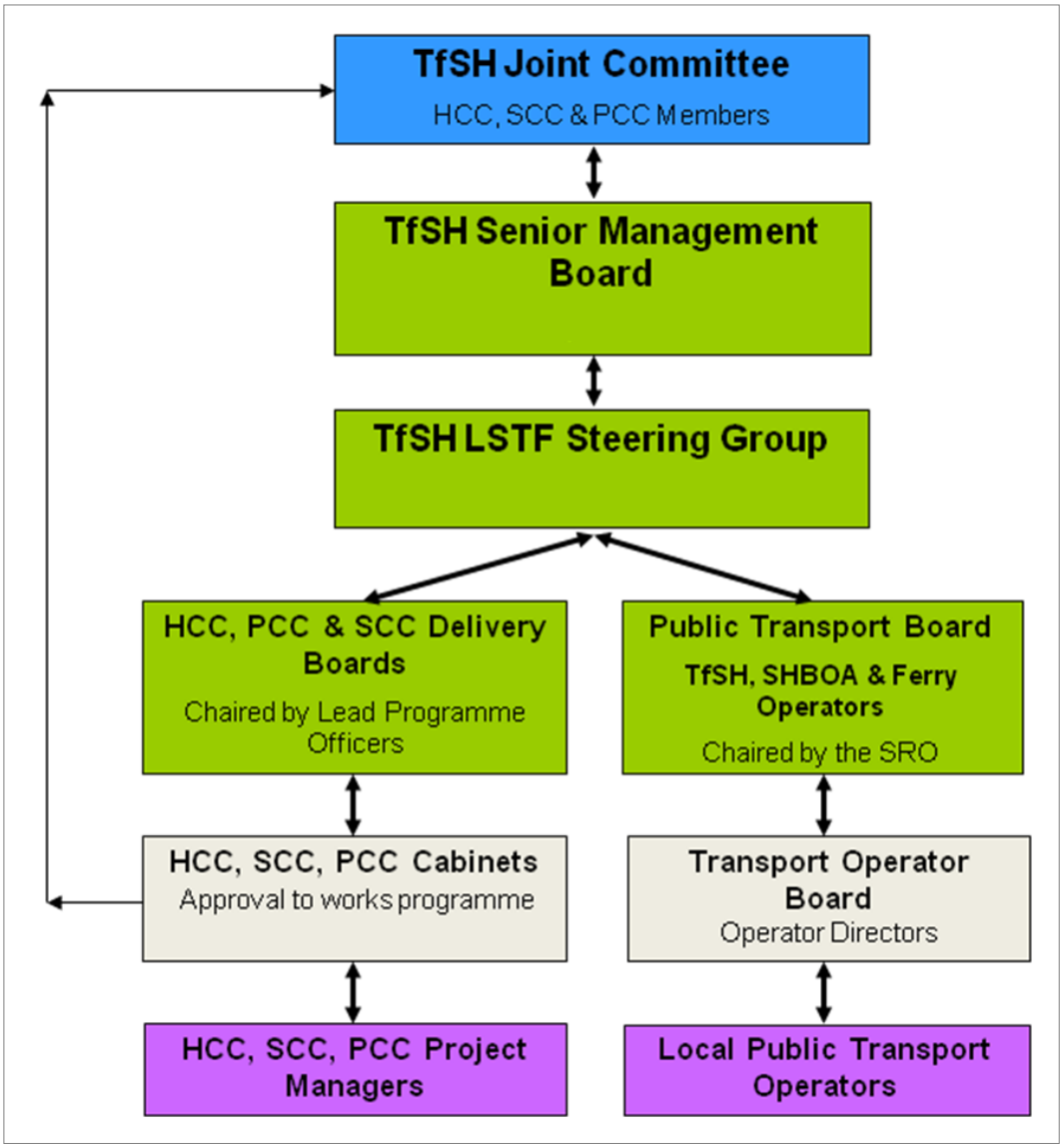


Figure 6.2: Governance Chart

Only two new governance structures are needed below this. The first is a new LSTF steering group. Core functions of this group are:

- To keep delivery focused of the outcomes required from the project
- Monitor performance against milestones and where necessary make changes to the overall strategy and programme
- Be the control mechanism for any programme related changes required or proposed
- Review and challenge risks
- Commission annual reports and direct evaluation
- Report to the TfSH Senior Management Board (SMB) on a 1/4ly basis and TfSH joint Committee on an annual basis

- Commission the setting up of delivery mechanisms for area wide initiatives and projects
- Coordinate programme finances and quarterly returns to the DfT

The Steering Group will be chaired by a new post created within the TfSH team. This is the Senior Responsible Officer post. This post holder will be lead client for area wide initiatives and the commissioning of evaluation and monitoring. They will also be the overall programme manager with responsibility for maintaining, the project plan, mapping of milestones and understanding critical paths and project dependencies. Individual projects which are local authority specific will be managed through local programme and project managers using existing processes. The post holder will report directly to the TfSH SMB members and be first contact for the DfT on LSTF matters.

This is a key position as the project will require strong and effective leadership from the outset. Following submission of the bid and in anticipation of a successful outcome post job description, evaluation and recruitment processes will be initiated. However, a decision to appoint will not be possible before formal agreement of funding.

The other new structure is a Public Transport Board. This will create new linkages between all public transport operators and local authorities. In effect the Board will perform a role similar to a Passenger Transport Executive, and will:

- Own and maintain the Memorandum of Understanding for smart ticketing delivery
- Monitor and champion the creation of local agreements between public transport authorities and local authorities
- Coordinate the delivery of an interoperable smart ticket and ticketing products
- Report on progress to the LSTF Steering Group
- Develop a public transport marketing and information strategy
- Ensure compliance with Traffic Commissioner and OFT requirements

The governance diagram also shows approval mechanism for schemes. Whilst TfSH is a formalised joint committee attended by the portfolio holders for transport from all three local authorities it does not have delegated authority to agree delivery of initiatives in each local authority. Such approvals are required from full Council and Cabinet of each authority in accordance with the normal annual setting of budgets and approvals to spend. This is normal practice, and presents no delivery of programme management problems providing appropriate processes are complied with and acknowledged.

Similarly the investment decision of private companies delivering elements of this project are governed by their own existing internal board arrangements, and not through TfSH.

Area wide initiatives will be client managed by the SRO, and either be delivered by a lead local authority (as in the case of a shared smart ticketing back office) or through other delivery arrangements (for some behaviour change initiatives this will be the Centre of Excellence for Behaviour change).

6.3 Programme and Project Management Principles

Our approach to programme and project management is, to an extent, already well embedded within each authority's local procedures. Each authority operates a form of Gate system, based upon the OGC Gateway™ model, with programmes and projects examined at key pause-points in their lifecycle, as part of their ongoing capital and revenue processes.

Though documentation differs within each authority, the main challenge - demonstrating evidence to support project readiness - is covered by all three authorities' processes, and gates remain shut until an independent review is complete.

There are four pause-points common across each authority's project management systems;

- **Scoping** – before feasibility, an outline business case sets out the provenance, need, aims and links to strategies. Identifies risks, funding potential and desired outcomes.
- **Design** – at end of feasibility, full business case updates the previous, focussing on the deliverables and outputs. Sets baseline budget and programme.
- **Implementation** – before procurement, appraisal to review and refresh business case, and seek relevant procurement approvals.
- **Review** – at end of project, measure of success, covering; process, key dates, finance, and outcomes.

The most popular project management methodology, PRINCE2™, is a complex and thorough set of processes suitable for larger projects. Each authority has many trained and competent practitioners delivering a varied programme of projects already. However, the level of effort and importance placed on project management procedures need to be commensurate with the complexity and risk exposure of each project. The prescribed procedures under PRINCE2™ can be burdensome for smaller projects, and each authority has developed a local, less complex, set of standards to support delivery of its own capital and revenue programmes.

Standard documentation common across each authorities' project management systems include:

- **Brief and Plan** – Project brief from the client. Project Plan from the project manager. Initial estimate and programme.
- **Change Control** – Agreed changes in scope, cost or duration are logged and signed off by client and project manager. Baselines adjusted.
- **Risk Management –** Commensurate to the size and/or importance of the project, a risk log is maintained and, where appropriate, costed.
- **Monitoring –** Regular communication and monthly progress updates. Spend and delivery monitoring against agreed milestones.
- **Approvals –** Reports to Chief Officers and/or Executive Member

6.4 Project Plan

A project plan has been prepared showing the key output milestones, interactions and timescales for the three strands across the nine corridors, and area-wide implementation of behaviour change and Smart Ticketing.

TfSH - LSTF Key Milestones Project Plan

Theme	Corridor	Ref	Task/Project Name	Overall Cost (£)	LSTF Grant Sought (£)	Milestone Name	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	A2	A3	A4	Comment
Finance			Grant Claims			S51 Sign-off		*	*	*	*	*	*	*	*	*	*	*	
						Due date		*	*	*	*	*	*	*	*	*	*	*	
PI	1	A4	Hythe Passenger Transport Interchange and Public Realm Improvements	225,000	92,500	Feasibility designs completed and approval of operators/lease holders secured. Detailed design commences.													Some complex interrelated land uses and access arrangements. Land ownership uncertainties. Conservation area. New Forest DC are committed to improving the area. Early consultation with ferry operator. Establish land ownership/ boundary issues early on.
						Detailed designs completed and consultation approvals granted. Procurement of contractors begins.													Phased introduction of scheme components - beginning with more readily deliverable elements.
BC	1	10	Hythe Ferry interchange travel plan	30000	30000	Develop Travel Plan													
						Implement Travel Plan													Link to Interchange and Public Realm improvements.
BC	1	9	ExxonMobil Fawley Oil Refinery Travel Plan	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
BC	1	11	Personal Journey Planning	60000	60000	PJP pre-implementation stage													
						PJP delivery													
PI	2	A1	Totton Railway Station and wider area improvements	365,000	300,000	Consultation exercise with local residents, frontagers, business and SWT completed. Detailed design commences.													Where works will impact on residential and commercial frontagers early consultations to gain support will be essential to delivering within timescales.
PI	2	B2	Southampton City Centre improved cycle access to the Itchen Bridge	985,000	485,000	Feasibility designs completed. Detailed design commences.													Phased implementation of on and off road sections of cycle lane
						Programme of works schedule finalised													Programme of works outlined and scheduled to manage disruptions to the highway network.
PI	2	B26	Southampton Station Quarter (North) Interchange and Public Realm Improvements	2,000,000	500,000	Feasibility designs completed and approval of operators/lease holders secured. Detailed design commences.													Entails agreements with private operators - and will attract wide consultation and public interest.
						Detailed designs completed and consultation approvals granted. Procurement of contractors begins.													Phased introduction of scheme components - beginning with more readily deliverable elements.
BC	2	12	Totton college travel plan	15000	15000	Develop Travel Plan													
						Implement Travel Plan													
BC	2	13	Totton station travel plan	20000	20000	Develop Travel Plan													
						Implement Travel Plan													
BC	2	14	PJP (pedestrian access/ legibility focused work)	60000	60000	PJP pre-implementation stage													
						PJP delivery													PJP to recruit local staff including long term unemployed
BC	2	15	Freight (ERDF match funding - consolidation centre and online booking)	225000	225000	Match funding to ERDF freight project													Contribution to ERDF funded freight consolidation and on-line booking system project
PI	3	A16	Romsey Railway Station Area Improvements	60,000	60,000	New Train Operating Company Franchisee announced for the route													Current franchise holder is First Great Western. Has been proposed that a requirement for next franchise period includes the provision of rail-side RTPI. Scheme proposals will require the support of the Franchise holder.
BC	3	16	Adanac Business park TP network	60000	60000	Develop Travel Plan													
						Implement Travel Plan													
BC	3	17	PJP Baddesley/ North Romsey	60000	60000	PJP pre-implementation stage													PJP to recruit local staff including long term unemployed
						PJP delivery													
BC	3	18	North Shirley home delivery/ freight project (cycle)	50000	50000	Feasibiltiy													
						Promotion													
						Delivery													Continues beyond funding as aim to run as self-financing operation
BC	3	19	General Hospital travel Plan	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
PI	4	A5	Chandler's Ford Commuter Shuttle Bus Pump Priming	200,000	90,000	Applicable businesses and Councils agree to mutually acceptable terms for Commuter Shuttle provision.													Contractual agreements put in place and signed to the satisfaction of applicable businesses, Eastleigh BC and Hampshire CC.
BC	4	23	Chandler's Ford Commuter Forum /Area Travel Plan	50000	50000	Develop options													In conjunction with the shuttle bus
						Implement Travel Plan/related measures													
BC	4	20	Solent University Travel Plan (enhanced)	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
BC	4	21	University of Southampton Travel Plan (enhanced)	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
BC	4	22	Chandler's Ford Station Travel Plan	20000	20000	Develop Travel Plan													
						Implement Travel Plan													
PI	5	A22	Eastleigh Railway Station Forecourt and Urban Realm Improvements	1,387,776	339,768	Feasibility designs completed and approval of operators/lease holders secured. Detailed design commences.													Entails agreements with private operators - and will attract wide consultation and public interest.
						Detailed designs completed and consultation approvals granted. Procurement of contractors begins.													Phased introduction of scheme components - beginning with more readily deliverable elements (i.e. removal of planters and initial resurfacing).
BC	5	26	Eastleigh Town Centre Travel Plan	60000	60000	Develop Travel Plan													
						Implement Travel Plan													
BC	5	24	Royal South Hants Hospital	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
BC	5	25	Portswood PJP	60000	60000	PJP pre-implementation stage													PJP to recruit local staff including long term unemployed
						PJP delivery													
BC	5	27	Eastleigh college travel plan	15000	15000	Develop Travel Plan													
						Implement Travel Plan													
BC	5	28	Barton Peveril college travel plan	15000	15000	Develop Travel Plan													
						Implement Travel Plan													
PI	6	B3	Weston/Woolston Cycle link to Central Southampton	985,000	485,000	Feasibility designs completed. Detailed design commences.													Phased implementation of on and off road sections of cycle lane
						Programme of works schedule finalised													Programme of works outlined and scheduled to manage disruptions to the highway network.
BC	6	29	East Point Centre travel plan	15000	15000	Develop Travel Plan													
						Implement Travel Plan													
BC	6	30	Burlesdon Personal Journey Planning	60000	60000	PJP pre-implementation stage													PJP to recruit local staff including long term unemployed
						PJP delivery													
PI	7	C14	Bus service improvements to Daedalus site linking to BRT	3,350,000	350,000	Operator agrees specific terms of route subsidies and specifications													Bus Operator (First) and Hampshire CC agree and sign up to specific terms of the subsidy arrangement
BC	7	35	Daedalus travel plan	60000	60000	Develop Travel Plan													
						Implement Travel Plan													
BC	7	31	Gosport Ferry Terminal Travel Plan	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
BC	7	32	Fareham Station Travel Plan	20000	20000	Develop Travel Plan													
						Implement Travel Plan													
BC	7	33	Gosport hospital travel plan	30000	30000	Develop Travel Plan													
						Implement Travel Plan													
BC	7	34	Personal Journey Planning (for BRT)	30000	30000	PJP pre-implementation stage													PJP to recruit local staff including long term unemployed
						PJP delivery													

PI	8	A9,B20	Waterlooville Town Centre link to Bus Interchange	797,500	47,500	Councillors decision and final route options confirmed												Havant BC Councillors are due to come to a position on the acceptability of a town centre cycle route in early 2012. Outcome will determine final route alignment.
BC	8	36	Cosham Area Travel Plan	105000	105000	Develop Travel Plan												
						Implement Travel Plan												
BC	8	41	Cosham railway station travel plan	20000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	8	37	Horndean college travel plan	15000	15000	Develop Travel Plan												
						Implement Travel Plan												
BC	8	38	Southdown College travel plan	15000	15000	Develop Travel Plan												
						Implement Travel Plan												
BC	8	39	Personal Journey Planning	60000	60000	PJP pre-implementation stage												PJP to recruit local staff including long term unemployed
						PJP delivery												
BC	8	40	Portsdown travel plan network	60000	60000	Develop Travel Plan												
						Implement Travel Plan												
BC	8	42	Southsea Area Travel Plan	60000	60000	Develop Travel Plan												
						Implement Travel Plan												
PI	9	B1	Improve cycle and ped links between Havant Bus and Rail Stations	610,000	90,000	Feasibility designs completed. Detailed design commences.												Phased implementation of on and off road sections of cycle lane. Programme of works outlined and scheduled to manage disruptions to the highway network.
BC	9	43	Havant Hospital Travel Plan	30000	30000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	44	Havant station- brompton cycle hire	20000	20000	Identifying locations												In partnership with South West Trains
						Marketing												
BC	9	45	Havant college 6th form college travel plan	15000	15000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	46	Portsmouth City Centre travel plan network	60000	60000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	47	Hilsea Business Travel Plan Network	60000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	48	Bedhampton train station Travel Plan	20000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	49	Hilsea train station Travel Plan	20000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	50	Fratton/Milton Area Travel Plan	80000	80000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	51	Portsmouth Harbour Interchange Travel Plan	20000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	52	Portsmouth and Southsea Station Travel Plan	20000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	53	Fratton Station Travel Plan	20000	20000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	54	Hard Area Travel Plan	50000	50000	Develop Travel Plan												
						Implement Travel Plan												
BC	9	55	Personal Journey Planning	60000	60000	PJP pre-implementation stage												PJP to recruit local staff including long term unemployed
						PJP delivery												
PI	All	B37	Bus fitted with on-bus AVL (Automatic Vehicle Location) detectors	938833	938833	Specification for AVL roll-out agreed with operators and contractor appointed.												AVL to be introduced on non- Southampton bus routes (Southampton already have AVL). Activation of new interchange and bus stop RTI screens dependent on installtion of AVL.
BC	All	1	Travel awareness, branding, publicity and campaigns (inc. new wesbite)	750000	750,000	Develop branding, designs and marketing plan												Develop an overarching design with phased roll-out of specific messages and calls to action. Use of mosaic data to target key audiences.
						Deliver marketing campaign												Marketing plan to use vlm sites eg local media, banners outside schools, etc
						Develop new website												Specific new smarter travel website detailing products available to assist behaviour change
BC	All	2	Smart Card new product promotion	300000	300,000	Develop marketing plan												Specific campaign to promote the new smart card system
						Deliver smartcard promotions												
BC	All	3	Itrace (travel plan) monitoring	28000	28,000	Use i-trace monitoring tool												Use i-trace system across all 3 la
BC	All	4	Legible Bus Networks	350000	350,000	Design Legible Bus network												New Legible Bus Network to aid new and exisitng bus passengers to use timetables, route maps etc and to be DDA compliant
						Install legible Bus Network												
BC	All	5	Schools - modeshift and road safety	600000	600,000	Deliver school travel plans - focus on achieving modeshift and reducing child casualties												Continue and expand exisiting programme
BC	All	6	Active steps/ StreetTred	600000	600000	Deliver Street Tred programme												Delivered by Sustrans
BC	All	7	Car Clubs	110000	110000	Review car club scheme and prepare for expansion												Work with Common Wheels and larger operators to expand the network
						Install new car club bays												
BC	All	8	Job Centre Plus	340000	340000	Deliver back to work support scheme with Job Centre Plus												Work with Job Centre Plus to provide travel support and assistance for job seekers
SmT	N/A	S1	On bus equipment	1,376,135	738,204	Ticket Machines (incl. Parts and tools) - on bus												
SmT	N/A					Handheld readers												
SmT	N/A					Installation: survey & equipping plan & Installation & testing												
SmT	N/A					Training												
SmT	N/A					Warranty (12 months)												
SmT	N/A					SAM												
SmT	N/A					SAM commissioning												
SmT	N/A					SAM connecting Annual Fee												
SmT	N/A					Maintenance p.a.												
SmT	N/A	S2	Depot system	953,419	511,445	Hardware and systems software per depot (PC, Modem, Firewall etc…)												
SmT	N/A					ETM Management Software per depot												
SmT	N/A					Configuration/Fares Software per depot												
SmT	N/A					Revenue Management Software per depot												
SmT	N/A					Train depot staff												
SmT	N/A					Software Licence fees (One off price with no ongoing fees)												
SmT	N/A					Installation												
SmT	N/A					Configuration												
SmT	N/A					Software warranty (12 months)												
SmT	N/A					Maintenance p.a.												
SmT	N/A					Enhanced (SLA based) maintenance p.a.												
SmT	N/A	S3	Design / Testing	58,460	31,360	Conceptual Design Review Package per operator												
SmT	N/A					Test Development and Management per operator												

SmT	N/A	S4	Communications	246,981	132,489	Site Survey	
SmT	N/A					WLAN equipment (inc install and config)	
SmT	N/A					Broadband line and modem for inter-depot communications	
SmT	N/A					Broadband line (ongoing monthly cost)	
SmT	N/A					WLAN Basic maintenance p.a.	
SmT	N/A	S5	Ticket offices/Sales system	957,902	513,850	TOMS	
SmT	N/A					TVMs	
SmT	N/A					Web sales System interface	
SmT	N/A					Development work for sales system	
SmT	N/A					Sales System reporting	
SmT	N/A					SAM	
SmT	N/A					SAM commissioning	
SmT	N/A					SAM connecting Annual Fee	
SmT	N/A					Maintenance p.a.	
SmT	N/A	S6	Smartcards	278,550	149,423	8k Desfire smartcard	
SmT	N/A					2 printers (for steady state) - ESP	
SmT	N/A					Ribbon and cleaning kit (1 each per year for each of printers)	
SmT	N/A					CMS set up	
SmT	N/A					Churn on commercial cards pa	
SmT	N/A					CMS annual cost	
SmT	N/A	S7	AMS/HOPS	1,758,639	943,391	AMS/HOPS	
SmT	N/A					HSAM	
SmT	N/A					HSAM commissioning	
SmT	N/A					Payment System	
SmT	N/A					Integration (Operators)	
SmT	N/A					Integration (overhead, project management cost per suppliers x 4)	
SmT	N/A					Know Your Customer - set up fee	
SmT	N/A					Back Office hardware	
SmT	N/A					Product registration - set up fee	
SmT	N/A					Asset Management - set up fee	
SmT	N/A					Shell owner - set up fee	
SmT	N/A					HSAM commissioning Annual Fee	
SmT	N/A					ITSO license Annual Fee	
SmT	N/A					Product registration - annual fee	
SmT	N/A					Asset Management - annual fee	
SmT	N/A					Maintenance p.a.	
SmT	N/A					Payment system annual fee	
SmT	N/A					Shell owner - annual fee	
SmT	N/A	S8	Ferry	1,672,937	897,418	Design / Testing - conceptual design review package per operator	
SmT	N/A					Design / Testing - test development and management per operator	
SmT	N/A					Communications - site survey/WLAN equipment/broadband line and modem	
SmT	N/A					Back Office integration	
SmT	N/A					TVMs	
SmT	N/A					Central computer to manage validators	
SmT	N/A					System reporting	
SmT	N/A					Handheld readers & SAM. Commissioning & annual connection fee	
SmT	N/A					Maintenance p.a.	
SmT	N/A					Validators purchase & installation	
SmT	N/A					Platform enabling	
SmT	N/A					TVMs & SAM. Commissioning & annual connection fee	
SmT	N/A					Maintenance p.a.	
SmT	N/A	S9	Project management	576,517	309,263	Project management	
SmT	N/A	S10	Integration costs	288,259	154,631	Integration costs	
SmT	N/A	S11	Contingency	1,153,035	618,525	Contingency	

More detailed delivery programmes for the physical interventions, behaviour change and smart ticketing strands have also been prepared. These are provided in Appendix 6.1.

Critical Path

Key project interdependencies relate primarily to the installation of RTI and AVL. Defining the critical path, at this stage, is difficult without a detailed roll-out plan in place. In general, RTI follows AVL and Smart Ticketing.

Complications are as follows:

- New RTI in Southampton to be mainly fed by buses wih LSTF Smart Ticketing, but could be fed by existing buses with AVL.
- New RTI in Portsmouth to be fed by buses installed with new LSTF AVL (assuming Portsmouth sign up to RTI/AVL)
- New RTI in Hampshire County Council to be fed by some existing buses with AVL, but most by buses fitted with new LSTF AVL.

Most of the physical interventions are deliverable independently from one another. There are minor interdependencies within this strand with wider-installation projects, such as the Legible Bus Network signage after or alongside public realm improvements at interchanges. Similarly one or two dependencies with Behaviour Change, for example, the Chandler's Ford Shuttle Bus being co-ordinated by the Chandler's Ford Area Wide Travel Plan Forum. These are shown on the plan.

Smart Ticketing is a stand-alone project, the only interdependency on the critical path being marketing.

6.5 Risk Management

The process of identifying, assessing, responding to, monitoring, controlling and reporting risks is summarised in this section. It outlines how risk management activities will be performed, recorded and monitored throughout the lifecycle of the project and sets out proposed risk management structure, within the existing governance illustrated above.

Risk identification is the responsibility of the entire project team, including appropriate stakeholders. Local authority project managers overseeing delivery of named projects will responsible for identifying impact and interdependencies, paying careful attention to environmental factors and organisational culture, as well as scope, schedule, cost and quality factors.

All risks will be logged onto a project register. Key risks will be allocated an owner. The risk owner will be responsible for assessing, in more detail, the range of possible outcomes, defining the level of risk, contingency planning,

monitoring, controlling and updating the status of the risk throughout the lifecycle of the project.

Key risks will be reported up to the three authority programme managers and the SRO. New or updated risks across the range of projects being delivered will be discussed and challenged by the delivery boards before reporting issues and exceptions to the steering group.

Risks closure will be considered by the project manager when the event has passed, is no longer valid or considered a risk. These will remain on the log and associated costs will either be transferred to the project, or removed.

The various projects within this bid have been risk assessed, and a detailed set of risk registers, created in accordance with WebTag 3.5.9 guidance, can be found in Appendix 6.2.

The most significant risk to the success of this project is the adoption of a public transport interoperable smart card by bus and ferry operators. This element of the project is, to a large extent, stand alone in terms of delivery, but the benefits claimed depend upon full integration across modes. To mitigate this risk, operators and TfSH authorities have signed a Memorandum of Understanding, which agrees to develop a contractual Agreement between January 2012 and June 2012 and provides a framework for a formal Agreement and subsequent roll-out of the increased use of Smartcards and other smart ticketing technology. The Partners have agreed to implement the same versions of the ITSO technology, design and build a fully interoperable and extendable multi-modal smart ticketing platform. This contractual relationship will allow each spending authority to agree the offer with operators, with the Agreements being signed back-to-back. Risk management and controls will be the responsibility of the new Public Transport Board.

6.6 Benefits Realisation

The Benefits Realisation Strategy and Plan has been developed to outline the approach to managing benefits and a methodology for tracking the realisation of benefits across the programme. It is linked to the Monitoring and Evaluation of the programme, discussed in Section 6.7, which will demonstrate, at discrete points in time, the performance of the programme against its own objectives and wider objectives, as set out in TfSH's Long Term Strategic Implementation Plan. The emerging Benefits and Realisation Strategy and Plan is included as Appendix 6.3 to this document.

We recognise that the underlying principles of the LSTF evaluation should be proportionality, partnership and prioritisation (targeting key evidence gaps). With this in mind, we suggest a two tiered assessment for monitoring and benefits realisation:

- **Tier 1** is a high level assessment of the overall outcomes of the Fund covering what was delivered, what change occurred and what was the impact on economic growth and carbon reductions. This will be covered by the annual telephone survey and the analysis of quantitative data and of KPIs, building on the work done in the Sustainable Travel Towns, Cycling Demonstration Towns, Cycling Cities and Towns and Smarter Travel Sutton.
- **Tier 2** is in depth evaluation of 'case study initiatives'. This should examine what works, in which circumstances, for whom, why/why not and how delivery can be effective. It is based on Pawson's realist evaluation approach with an emphasis on context, mechanisms and process (being used in the iConnect project being led by the University of Southampton and discussed below). It will link in with the Southampton small LSTF evaluation where a four arm randomised control type experiment is proposed. This would involve four groups (i) those involved in personalised journey planning (ii) those involved in workplace travel plans (iii) those involved in both (iv) those involved in neither. One of the key evidence gaps is understanding the contribution of different interventions. Particular emphasis would be placed on workplace accessibility. Use could be made of the EPSRC funded iConnect self-completion survey tool that is being used to evaluate the Southampton Riverside Boardwalk Connect2 scheme (surveys in 2010 and 2011, with a further survey planned for 2012). We are currently exploring the possibility of extending this survey for this LSTF major bid to cover (v) those involved in station travel plans (and (ii) refined to those involved in two of the initiatives or add (vi) those involved in both workplace travel plans and station travel plans and (vii) those involved in both personalised journey planning and station travel plans.

Existing data sources including Local Transport monitoring data and national datasets such as the National Travel Survey and Census 2011 data will be used where possible to establish the baseline against which the LSTF programme will be evaluation.

In considering both the benefits realisation and the monitoring and evaluation of the programme, we will look to link in with DfT's overarching evaluation framework, which is currently being established. As such, the Benefits and Realisation Strategy is a working document that will be developed as the overarching framework for monitoring emerges and following discussions with those responsible for neighbouring bids and complementary work.

6.7 Monitoring and Evaluation

The funds allocated to monitoring and evaluation of the LSTF programme will be used to produce an annual report. This report will demonstrate progress against the key objectives and in meeting the main modal shift target. It will also serve as an indicator on changing public attitudes with regards to travel behaviour and at the same time be used to inform key stakeholders of the range of activities being undertaken.

The budget over the three years is £300k, with the intention to divide this equally so the monitoring budget is £100k per annum. This will cover the costs of an annual telephone survey identifying changing behaviour and attitudes (targeted at mosaic segments), analysis of the quantitative data (traffic volumes, cycle counts, bus patronage, casualty figures, air quality etc) and an assessment against key performance indicators to be developed for each intervention. A summary of progress against each intervention will also be included highlighting areas of notable success or those requiring attention. This can be used to help shape and steer the delivery programme in subsequent years.

The funding will be used to monitor the impact of the whole LSTF programme including the three strands relating to smart cards, physical interventions and behaviour change.

Data contained in the report and analysis undertaken will be produced in conjunction with an independent academic organisation to add rigour to the data and ensure the report stands up to scrutiny. The report will be published annually and made available to the public and interested organisations in electronic format. Similar reports were produced by the three sustainable demonstration towns and Smarter Travel Sutton with the information being used subsequently in a large number of publications.

Proposed Monitoring Programme:

1 Travel Attitudes (Biannually)

General travel attitudes will be monitored across the urban South Hampshire area by means of a biannual travel attitudes survey. The baseline survey will be carried out in the first quarter of 2012 and will sample the populations of Portsmouth together with all significant urban areas that border the corridors where the proposed interventions will be implemented (such as the Waterside, Totton, Romsey, Eastleigh, Hedge End, Fareham, Gosport, Waterlooville & Havant). A similar survey has already been carried out in Southampton and the city will subsequently be incorporated into the wider South Hampshire survey programme in future years.

The programme will use a standardised survey throughout the LSTF period which will report on factors such as socio-economic group, modes of transport used and knowledge of/attitudes towards

different interventions such as Personal Travel Planning, Smart Cards etc

2 Modal Split (Annually)

Southampton currently carries out a comprehensive annual modal split survey which examines the modes used by people travelling into the city centre during the am peak and also those used by people leaving the city centre during the lunchtime period and pm peak. These surveys have been carried out over a 15 year period and with trends now established, it will be possible to identify additional modal shift above and beyond what would have occurred.

No equivalent surveys are currently carried out in Portsmouth or across the wider South Hampshire area and it is not proposed that they will be introduced for the purpose of the LSTF study. The Southampton based surveys should be sufficient to analyse the impact of the proposed measures on promoting modal shift.

3 Average Daily Vehicle Movements (Annually)

Through the use of existing automatic traffic counters it will be possible to monitor traffic flows along all key corridors identified by the TfSH proposal. The counters allow some limited identification of vehicle class so it is possible to differentiate between light and heavy vehicles.

The traffic flow data will be compared with past trends to establish whether the proposed interventions have had any impact on the level of traffic, with particular attention to light vehicle movements. Care will need to be taken to ensure the analysis takes into consideration any background variations that may be caused by the economic climate.

4 Average Journey Times along Key Corridors (Annually)

Automatic number plate recognition technology enables the average journey times of vehicles to be calculated. The corridors where this process can be carried out will depend on the location of existing ANPR equipment and this is currently being assessed.

A modal shift prompted by the proposed LSTF interventions should free up road space along the key corridors, improving traffic flows and providing measureable benefits in terms of journey time savings.

5 Bus Patronage (Annually)

Bus patronage data is collected annually from bus operators to provide a total figure for each local authority area. This will be used to analyse whether the proposed measures have promoted additional bus journeys by residents within the urban South Hampshire area.

Although the bus patronage figures for South Hampshire cannot easily be separated from the overall county figure, Southampton and Portsmouth are unitary authorities so individual figures are produced for these areas. As the majority of the key corridors feed into the two cities, any increases in bus patronage will be readily identified.

6 Travel Plans (Annually)

The TfSH LSTF bid proposes the introduction of widespread travel planning across businesses, schools, retail parks, stations, hospitals and universities. The measurable outcome will be whether the measures within the travel plans are being actively implemented and are subsequently promoting a change in behaviour amongst employees, students, commuters etc.

Consequently, all travel plans will be assessed annually and awarded a gold standard if the criteria outlined above are being met. The goal will be a year on year increase in the number of gold standard travel plans across the South Hampshire urban area.

7 Personal Travel Planning Activity (Annually)

Personal Travel Planning will be carried out in targeted areas along the key corridors and with be possible to analyse the success of the programme based on the feedback provided by the Personal Travel Planners. Analysis of this feedback will provide data such as the number of households who showed an interest in the service and subsequently requested further information.

Detailed analysis will be carried out with the number successful PTP interventions measured against different socio-economic groups and available public transport services.

8 Smart Card Journeys (Annually)

Following the introduction of Smart Card ticketing in the South Hampshire area, it will be possible to record the number of journeys that are made using Smart Cards. Once this data is available, it will be monitored for year on year variations and subject to the agreement of the public transport operators, it will be possible to provide data for different local authority areas and even specific corridors.

9 Employment Rate (Annually)

One of the key LSTF goals is to promote economic growth and this can be measured in a number of ways. The focus of the TfSH monitoring programme will be on employment within the South Hampshire area. The proposed LSTF programme will be create the right environment economic activity with the measurable outcome being variation in the number of available jobs. The figure reported will be the total number of people currently employed either full time or part time within the region.

10 Road Transport CO_2 Emissions

The other key LSTF goal is a reduction in carbon emissions associated with transport. Annual figures for carbon emissions by Road Transport are produced by Department for Energy and Climate Change with data available for different boroughs within the South Hampshire area and also for the two unitary authorities. This will be monitored throughout the LSTF programme for variations above what might have been expected.

Further to this, TfSH is working in partnership with the University of Southampton to produce a model that will calculate the carbon savings generated by the proposed LSTF interventions.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